BACTERIOLOGICAL APPARATUS

Pathological
Biochemical

The Will Corporation
Rochester, N.Y.

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Foreword

A powerful impetus has been given to the development of Clinical Pathology, Bacteriology, Bio-Chemistry and its allied sciences within the last few years. The rapid progress made is primarily the result of the persistence of scientific investigators whose untiring efforts have brought constantly improving methods of application, made possible in a measure through the employment of modern and reliably accurate apparatus.

In presenting this catalogue, it is our object to place at the disposal of our patrons a reference book wherein may be found a representative selection of approved equipment, as directly applying to laboratories of the character indicated. Other subjects, not intimately associated with these particular branches of science, have been advisedly omitted and will be treated separately in our subsequent literature.

We have limited this edition to the description of the more current supplies, but wish to emphasize our ability to furnish apparatus as may be needed to meet specific requirements. No effort will be spared in their development and correspondence in regard to the construction of new apparatus or the modification of already available equipment is respectfully solicited.

If this catalogue will contribute to your convenience and assist in the solution of your problems, our efforts in publishing a book of this nature will be amply repaid. Your criticism pertaining to its various phases will prove a welcome source for our future guidance.

We acknowledge with gratitude the generous support that our many friends have extended us in the past and we shall strive to merit their continued confidence.

To those with whom we are not as yet acquainted, our co-operation and the desire to serve them to the best of our ability are assured.

The Will Corporation

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Terms

When ordering from this catalog, please give catalog number, name of article and size. Special care should be taken in being specific in ordering accessory parts and in stipulating the current and voltage in the case of electrically equipped apparatus.

Credit and Financial Standing. To avoid delay, purchasers with whom we have no account and who have no mercantile rating, should accompany their first order with commercial references or remittance in cash, money orders, or New York or Chicago current funds, as your local check may be subject to collection charges.

Under an arrangement made by the Western Union Telegraph Co. orders can now be sent by telegraph between points in the United States, in the same message with remittance. Catalog numbers may be used. Information may be secured on application to nearest Western Union manager.

C. O. D. Shipments. No C. O. D. shipments will be made unless sufficient funds to cover delivery charges both ways accompany the orders. Goods made on special order, or to be sent on memorandum account, will not be forwarded C. O. D.

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Liability. In packing we double check all goods, and obtain proper receipts from the transportation companies. Unless otherwise specified, we shall use our best judgment in mode of shipping, prepaying transportation if requested and adding amount to invoice. Our responsibility ceases when we have delivered a shipment to the carriers. All claims for breakage should be reported to the transportation companies at once, as we cannot be held responsible for losses or damage to goods in transit. Please examine all packing minutely for small items.

Guarantee. We exercise the utmost care in manufacturing and packing. In case of faulty goods inadvertently reaching our customers, we shall feel under obligation if our attention is called thereto.

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Notice. Prices in this catalog are subject to change without notice. **We make no charge for boxing or packing** and no allowance for freight, express or parcel post charges.

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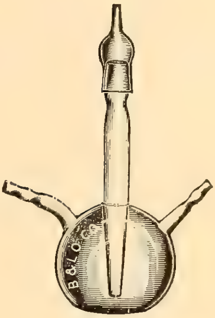
10005


10010

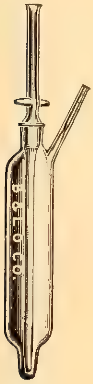
10000 **Acid Pitchers**—Of stoneware.

No.	A	B	C	D
Capacity, cc	500	1000	2000	4000
Each	.35	.40	.50	.85

10005 **Acid Pots**—Of stoneware.

No.	A	B	C	D	E	F	G	H
Capacity, liters	4	8	12	16	20	24	30	40
Each	1.00	1.50	2.00	2.70	3.00	3.25	4.50	5.20

10010 **Aeroscope—Miquel's.** For collecting bacteria from the air by aspiration through a liquid medium; of glass; neck extends into flask and is covered by ground-on cap; capacity, 150 cc ________________ Each $1.20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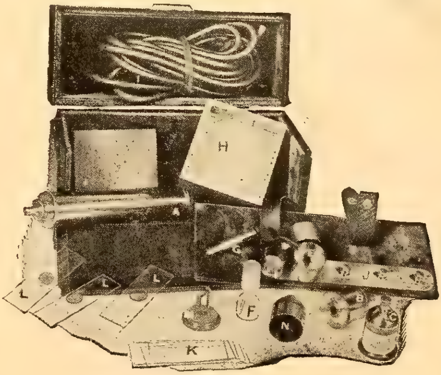
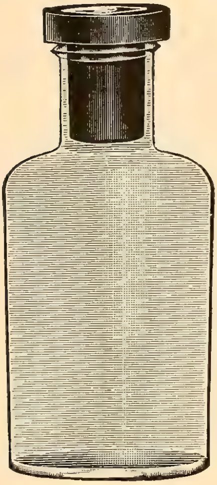


10020

10015 **Aeroscope—Straus-Wurtz's.** For collecting bacteria from the air by aspiration through water or gelatine; of glass________________Each 1.20

10020 **Air Tester**—Designed by Dr. E. Vernon Hill, Chief of Division of Ventilation, Chicago Department of Health; a most simple, reliable, satisfactory apparatus for testing purity of air for dust; enabling Boards of Health, Boards of Education and chemists to test air conditions accurately; complete equipment includes exhaust pump, three capsules BCN, T connection, two hose nozzles, slide box with 12 slides, cover slip box with 24 cover slips; bottle of adhesive mixture, 20 ft. of rubber tubing and seal-grain carrying case, plush-lined, with lock and key ________________________________ Each 100.00



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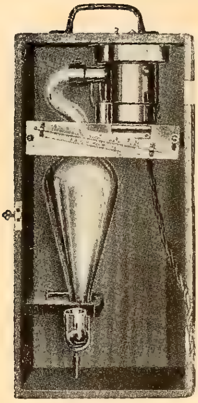

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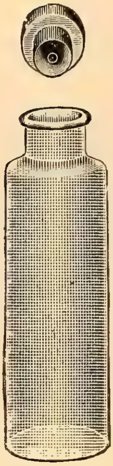


10040

10025 Air Testing Apparatus—Water Spray, Palmer's. A new device for the bacterial determination of air, designed by George T. Palmer, Chief of Investigating Staff, N. Y. State Commission on Ventilation; now considered standard and recommended by Standard Methods for sampling air; consists of glass bulb with tubular elongations at either end; an exhaust fan, connected directly to universal motor operating on 110-volt circuit, draws air from upper end of bulb through a venturi meter, the flow through which is indicated in cubic feet free air per minute on inclined manometer; in lower part of lower, U-shaped tube is placed a small quantity of filtered, sterilized water, through which the air to be sampled is drawn and the dust and bacteria taken out, the force of the air stream keeping the water in constant spray formation which washes the air of its dust as it passes through; water is then analyzed by standard methods and calculations made for the number of dust particles or bacteria per cubic foot of air drawn through; apparatus is enclosed in neat, mahogany case, measuring 18 x 9 x 6½ in., with damper on top of case used to regulate the rate of flow of air being drawn through; weight, about 15 lbs. ____Each 125.00

10030 Ampoules—Serum Bottles. Of clear, white glass; fitted with large antimony rubber stoppers.

No.	A	B
Capacity, cc	30	60
Per dozen	2.15	2.25
Per gross	21.50	22.50

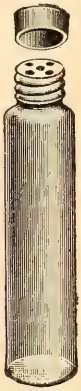
10035 Ampoules—Serum Bottles. Same as No. 10030 above, but without rubber stoppers.

No.	A	B
Capacity, cc	30	60
Per dozen	1.40	1.50
Per gross	14.00	15.00

10040 Ampoules—Serum Bottles. Of clear, white glass; supplied in a variety of capacities, as indicated, but with uniform neck, making it possible to use same size cork for all bottles; furnished with maroon rubber stoppers.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5	8	10
Per gross	4.00	4.35	5.35	5.80	7.20

No.	F	G	H	I
Capacity, cc	15	20	25	30
Per gross	8.30	9.70	10.90	12.00



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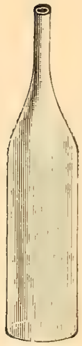


10070

10045 **Ampoules—Serum Bottles.** Same as No. 10040 above, but without rubber stoppers.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5	8	10
Per gross	2.10	2.60	3.50	3.95	5.35

No.	F	G	H	I
Capacity, cc	15	20	25	30
Per gross	6.50	7.85	9.10	10.20

10050 **Ampoules—Serum Bottles.** Same as No. 10040, but of amber glass.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5	8	10
Per gross	4.00	4.35	5.35	5.80	7.20

No.	F	G	H	I
Capacity, cc	15	20	25	30
Per gross	8.30	9.70	10.90	12.00

10055 **Ampoules—Serum Bottles.** Of amber glass, same as No. 10050 above, but without rubber stoppers.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5	8	10
Per gross	2.10	2.60	3.50	3.95	5.35

No.	F	G	H	I
Capacity, cc	15	20	25	30
Per gross	6.50	7.85	9.10	10.20

10060 **Ampoules—Vaccine.** Of clear, white glass, hermetically sealed; designed by Dr. E. C. Rosenow, of Memorial Institute for Infectious Diseases, of Chicago; consists of ground top, screw cap vial, fitted with a pure gum rubber washer; six-hole, perforated, aluminum cap, and aluminum, slip-over cap.

No.	A	B	C	D	E
Capacity, cc	5	10	15	20	25
Per dozen	1.30	1.60	2.15	2.30	2.40
Per gross	13.00	16.00	21.80	23.00	24.00

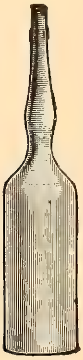
10065 **Ampoules—Vaccine.** Same as No. 10060 above, but of amber glass.

No.	A	B	C	D	E
Capacity, cc	5	10	15	20	25
Per dozen	1.30	1.60	2.15	2.30	2.40
Per gross	13.00	16.00	21.80	23.00	24.00

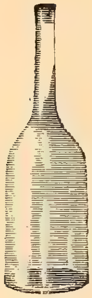
10070 **Ampoules.** Of best quality, clear, resistance glass; manufactured especially for this purpose and containing a very low percentage of alkali; with drawn stems and flat bottoms.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5-6	7-8	9-10
Per gross	2.90	3.70	4.10	4.30	5.15

No.	F	G	H	I
Capacity, cc	15	20	25	50
Per gross	5.35	5.55	5.75	8.60



10080



10090

10075 **Ampoules.** Same as No. 10070 above, but with round bottoms.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5-6	7-8	9-10
Per gross	2.90	3.70	4.10	4.30	5.15

No.	F	G	H	I
Capacity, cc	15	20	25	50
Per gross	5.35	5.55	5.75	8.50

10080 **Ampoules.** Of best quality, clear, resistance glass; with constriction in stems and flat bottoms.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5-6	7-8	9-10
Per gross	3.20	4.10	4.55	4.75	5.55

No.	F	G	H	I
Capacity, cc	15	20	25	50
Per gross	5.75	6.00	6.20	9.00

10085 **Ampoules.** Same as No. 10080 above, but with round bottoms.

No.	A	B	C	D	E
Capacity, cc	1-2	3-4	5-6	7-8	9-10
Per gross	3.20	4.10	4.55	4.75	5.55

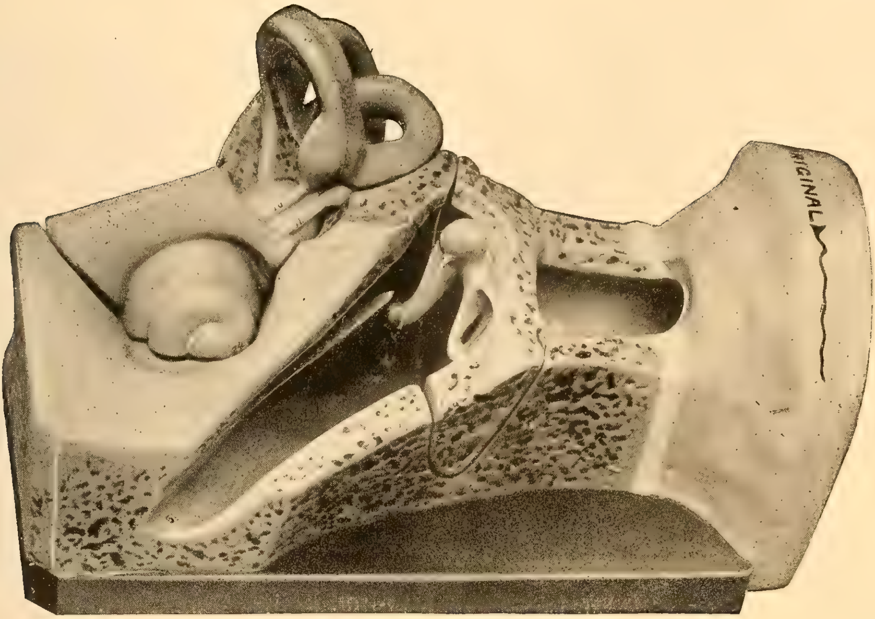
No.	F	G	H	I
Capacity, cc	15	20	25	50
Per gross	5.75	6.00	6.20	9.00

10090 **Ampoules—Antitoxin Bulbs.** Of clear, white glass.

No.	A	B	C	D
Capacity, cc	1-4	5-7	8-9	10
Per gross	7.40	8.10	8.55	9.00

10095 **Ampoules—Antitoxin Bulbs.** Of amber glass.

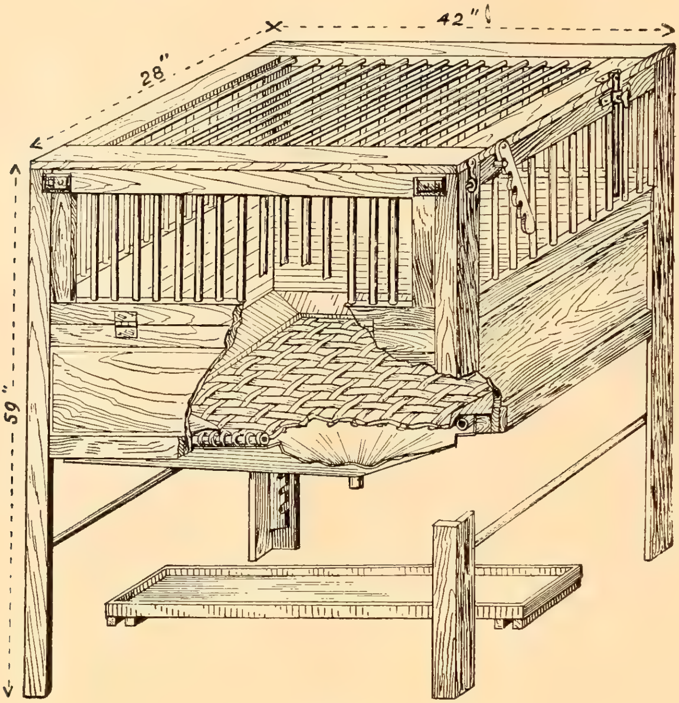
No.	A	B	C	D
Capacity, cc	1-4	5-7	8-9	10
Per gross	7.40	8.10	8.55	9.00



10105

Anatomical Models

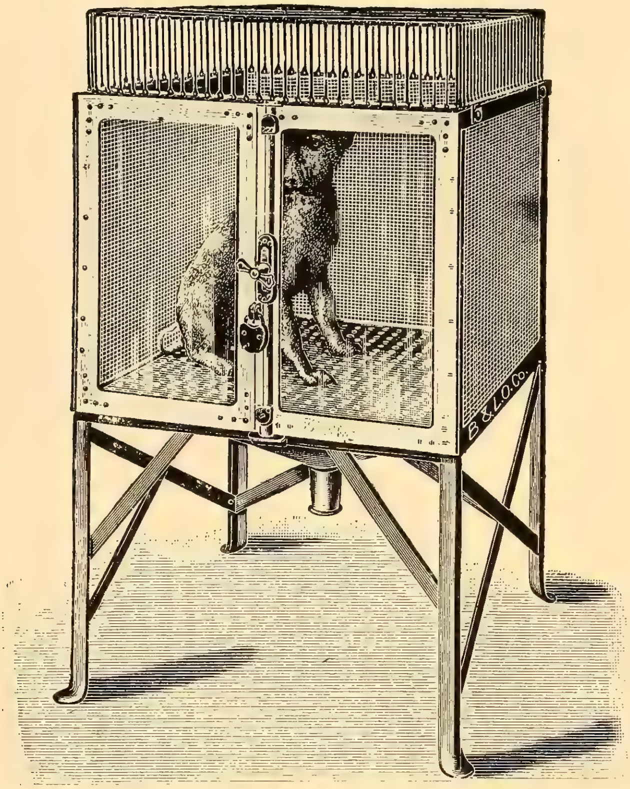
10105	**Model of Ear.** Consists of ear, with portion of external conch; separable into four parts; shows clearly auditory ossicles, tympanum and labyrinth, ampullae, cochlea and branching of auditory nerves; length, 13½ in.; a good model for school use Each	$12.00
	Packing, extra	.50
10110	**Model of Eye.** Consists of vertical section of eye, greatly enlarged; shows entire anatomy clearly—muscles, optic nerve and sheath, lens, iris, cornea, bones of orbit, ciliary body and muscles, sclerotic, choroid, retina, etc.; has no removable parts; mounted on ebonized panel, 16½ x 19½ in. Each	15.00
	Packing, extra	1.00
10115	**Model of Digestive System.** A new model, showing clearly the entire digestive system; mounted on placque, with full descriptive label; a very careful piece of work Each	18.00
	Packing, extra	1.00
10120	**Model of Heart.** Body wall removes, showing the auricles, ventricles, valves, etc.; greatly enlarged and mounted on placque, 15 x 10½ in.; the largest, low-priced model made Each	15.00
	Packing, extra	.75
10125	**Model of Intestinal Villi.** Two intestinal villi are represented in a model, 8 x 8 in., mounted on ebonized standard; shows on two surfaces the circulatory system of these organs, the veins and arteries leading to the periphery of these villi and the lymphatic vessels Each	7.00
	Packing, extra	.50
10130	**Model of Kidney.** Complete anatomy is clearly shown, including the renal artery and vein, ureter, pelvis, pyramids of Malpighi, columns of Bertin, etc.; measures 8½ x 6 in. and is mounted on ebonized standard with hinged support Each	15.00
	Packing, extra	.75
10135	**Model of Skin.** Consists of vertical section through the skin, enlarged 200 times, showing the three principal layers, sebaceous and sweat glands, hair roots, muscles, arteries and veins Each	5.00
	Packing, extra	.50
10140	**Model of Spinal Cord.** Consists of section of spinal cord, greatly enlarged, showing origin of spinal nerves and their ganglia, membranes, denticulated ligament and a typical cross section; mounted on standard and ebonized pedestal Each	11.00
	Packing, extra	.50



10155

10155 **Animal Cage.** For dogs; constructed throughout of solid oak, rubbed oil finish; inside lined with extra heavy zinc, rods being of ¼-in. steel, heavily galvanized; floor of closely woven, steel wire cloth, very strong and mounted on framework of pipe, heavily galvanized; drain pan of thick, galvanized steel, floor and drain pan being easily removed for cleaning; front door drops down out of way, and top may be raised to any desired angle; shelf beneath, holding urinal collecting vessel, adjustable for use of any sized vessel; domes of silence are used on bottom of legs to facilitate moving cage about laboratory when desired; dimensions, 105 x 70 x 147½ cm, satisfactory for ordinary large dogs, such as Setters or Newfoundlands, as well as smaller breeds ....Each 120.00

Materials for Metabolic Researches are furnished by us. We shall be pleased to attend to your inquiry regarding materials of this or any other character.

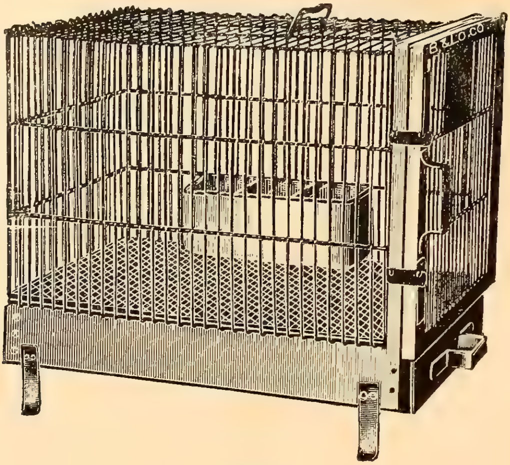


10160

10160 Animal Cages—Abderhalden's. Designed especially for metabolism experiments, etc.; top of stout wire mesh; doors of transparent plate glass; sides and rear of ribbed wire glass, so that adjoining animals do not annoy animal under observation; perforated floor, easily removable for cleaning, supports animal over conical bottom for collection of urine, etc.; heavily made throughout.

No.	A	B	C	D	E
Height, cm	85	75	70	60	50
Length, cm	85	75	70	60	50
Width, cm	85	75	70	60	50
Each	170.00	145.00	120.00	105.00	96.00

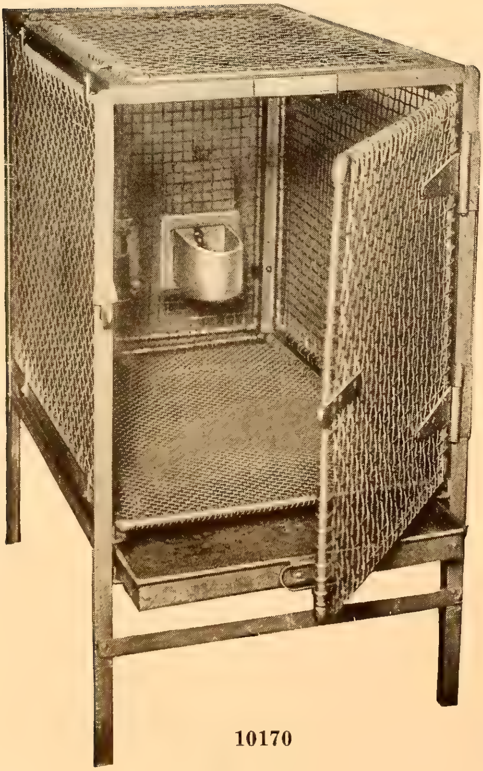
Your Laboratory needs can be met by us to your fullest satisfaction, whether in equipment, apparatus, reagents or chemicals.



10165

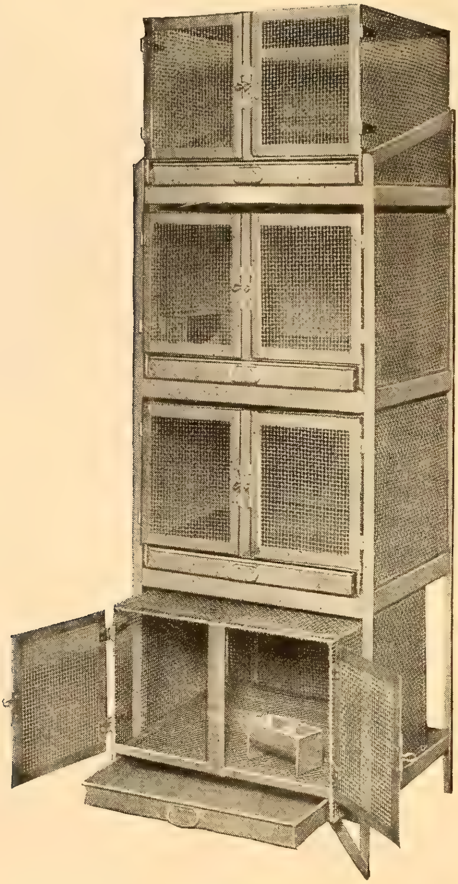
10165 **Animal Cages.** For small dogs, etc.; of extra heavy wire, with front and door of angle steel; inside floor and drawer removable.

No.	A	B	C	D
Height, cm	55	50	45	40
Length, cm	60	50	40	30
Width, cm	45	40	35	30
Each	**42.00**	**36.00**	**30.00**	**27.00**



10170

10170 **Animal Cage.** For dogs, medium size; of heavy galvanized steel mesh on framework of galvanized angle steel; provisions for feeding from rear side or front as may be desired; galvanized iron pan under floor, 2 in. deep, or can be made funnel shape for metabolism experiments; dimensions, height, 60 cm; length, 75 cm; width, 50 cm__Each **72.00**



10180

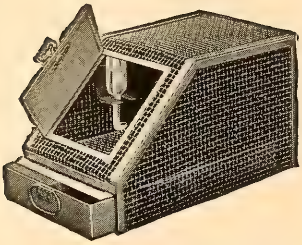
10180 **Animal Cage.** For cats, guinea pigs, rabbits or rats; made of strong, galvanized wire mesh, over extra heavy wrought iron frame; doors strongly constructed with heavy galvanized iron frame, fastened with secure catch; bottom pan of galvanized iron, can be removed without disturbing animal; also made with single door when desired; dimensions: height, 37½ cm; length, 50 cm; width, 55 cm.......Each 18.00

10181 **Animal Cage.** Same as No. 10180 above, but with solid partitions.Each 19.20

10182 **Animal Cage.** Same as No. 10180 above, but with partition, door in same, and extra cup ....Each 20.40

10185 **Stands for Animal Cages, Nos. 10180, 10181 and 10182 above.** Made of heavy galvanized steel, securely riveted to standard, made of heavy angle steel, strongly braced; unit system is recognized as most desirable method of keeping animals for experiment; Stand No. A provides unit holding eight cages, when made four shelves high; Stand No. B a unit holding four cages; any cage may be removed, if desired, without touching any other, and all cages are readily accessible for inspection or feeding.

No.	A	B	C	D
No. of Shelves	4	4	5	6
Width of Shelves, cm	120	60	120	120
Each	**30.00**	**17.50**	**36.00**	**42.00**



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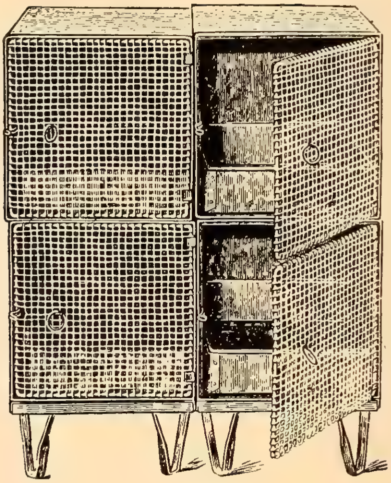
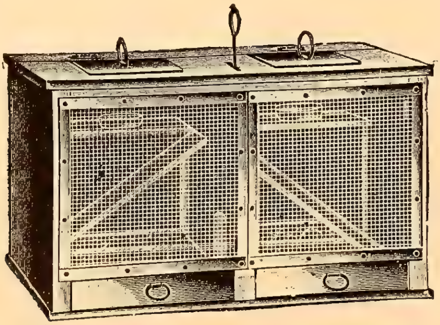


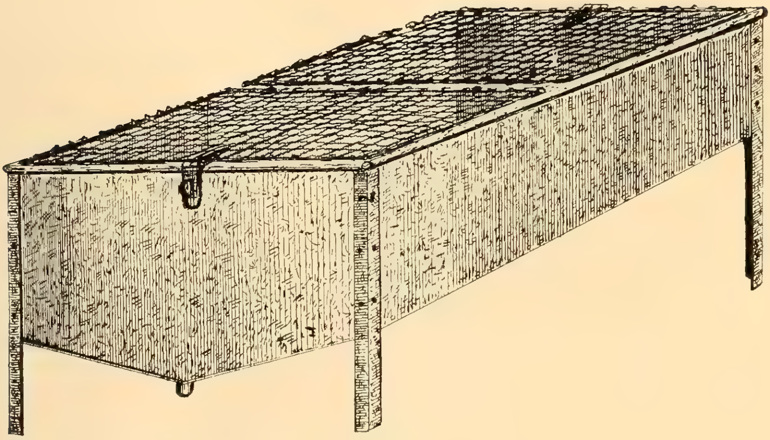
10200

10192	**Animal Cage. Army Medical School Model.** The most recent design in rat cages that has met with universal approval. Used by the Army Medical School, Johns Hopkins University, etc., with complete success. The doors are either hinged or sliding, the latter being especially desirable when handling wild rats where tongs must be used. Dimensions, 20 cm x 20 cm x 38 cm……Each	7.20
10195	**Stands for Animal Cages No. 10192 above.** Same as described and listed under Animal Cage No. 10180.	
10200	**Animal Cage—Phipps' Institute Model.** Made of heavy galvanized iron, with door of very strong wire mesh; so arranged that they may be bolted together for any height or number in width desired; usual practice is to have four cages on each stand; dimensions: height, 35 cm; length, 35 cm; width, 40 cm……Each	7.25
10205	**Stands for Animal Cages No. 10200 above.** Made to accommodate above cages as shown, 17 cm from floor; of heavy galvanized iron……Each	2.50



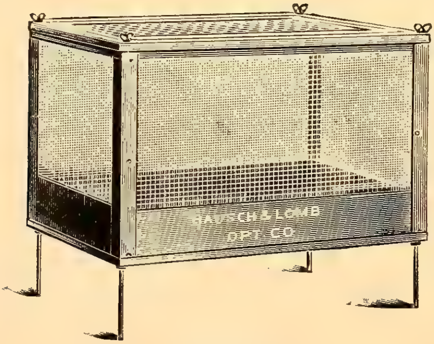
10210

10210	**Animal Cage—Heim's.** Especially designed for breeding mice and other small rodents; made of polished oak, lined with galvanized iron; shelf inside for food, and runway to same of wire cloth, are removable; drawer below removable for cleaning; dimensions: height, 30 cm; length, 30 cm; width, 50 cm……Each	19.50



10220

10220 **Animal Cage—Stock.** Height, 27½ cm; length, 120 cm; width, 60 cm. (This cage can be made in any dimensions desired) ____________Each 48.00



10215

10215 **Animal Cage—Vaughan's.** For inoculated rabbits, guinea pigs, etc.; made of heavy galvanized iron and strong heavy galvanized iron cloth; collapsible for storage and convenience in sterilizing; sides, bottom and top are all separate pieces, the loosening of four thumb screws at top permitting a complete take-down; dimensions: height, 30 cm; length, 37½ cm; width, 50 cm______________________Each 12.00

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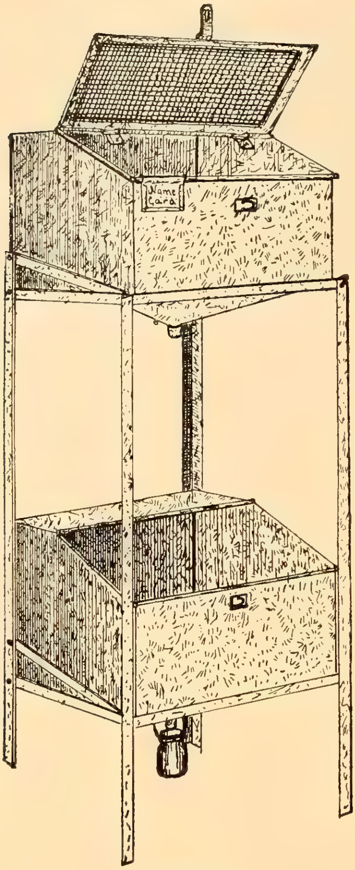

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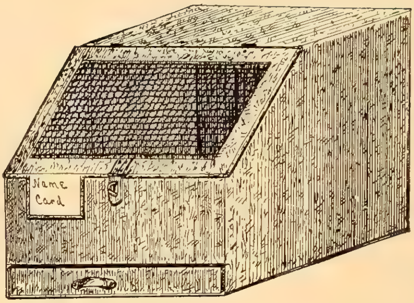
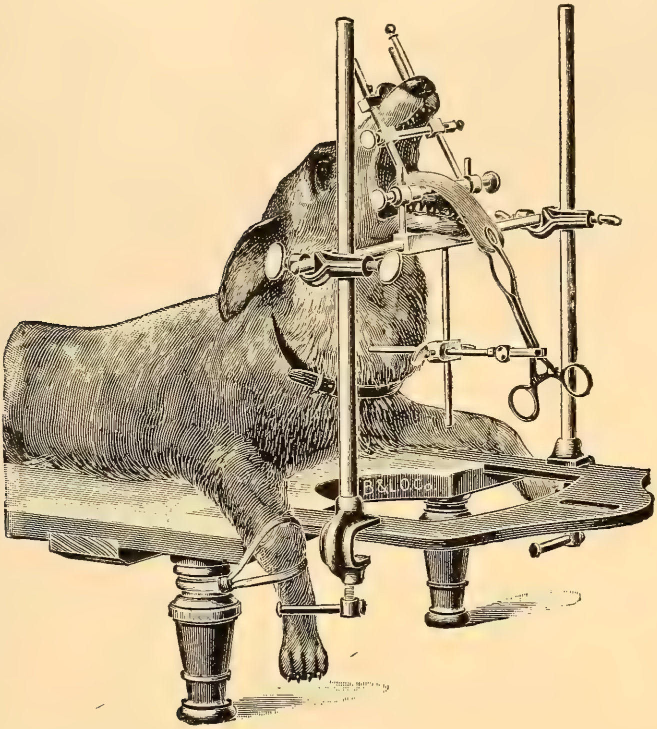


10230

10225	**Animal Cages—Twin Model.** The most economical cage for metabolism, taking one-half the room required for single cages; construction is such that urine and litter of upper cage cannot get into lower cage; made of heavy galvanized iron and strong wire mesh; in addition to each cage lifting off rack, each part as shown is readily detached for cleaning; dimensions: height over all, 120 cm; length, 32½ cm; width, 45 cm; headroom, 20 cm; furnished complete with stand ....Per pair	24.00
10230	**Animal Cage—Shelf.** For guinea pigs, rabbits or rats; of simplest possible construction; lid is removable, and removable drawer permits easy cleaning of cage; made of heavy galvanized iron and stout wire mesh; dimensions: height, 32½ cm; length, 30 cm; width, 30 cm ....Each	6.50

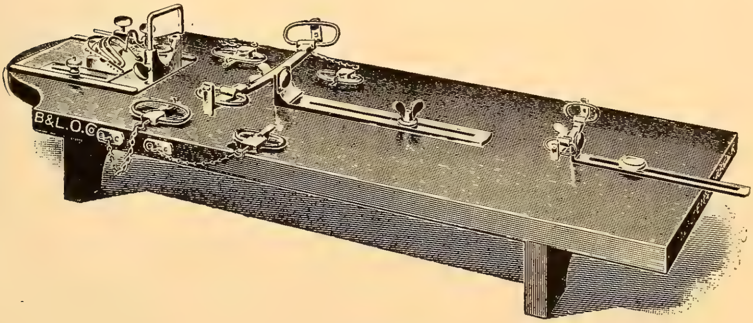
ANIMAL CAGES

Cages of any size or construction furnished. Let us know your needs.



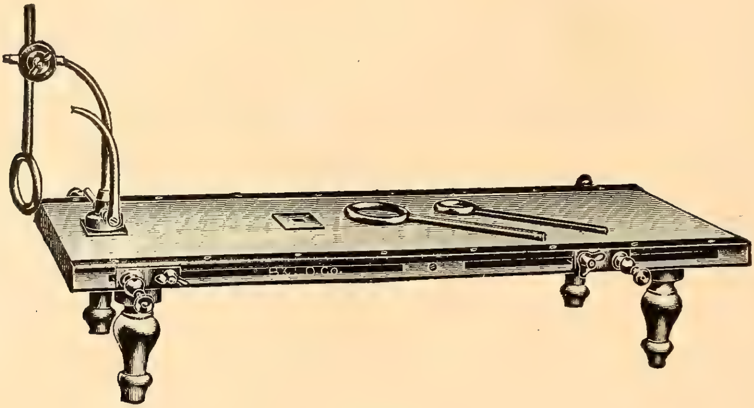
10235

10235	**Animal Holder—Operating Board—Cowl's.** For dogs; provided with adjustable mouth opener, head holder, tongue tongs and clamp for same, upright rods with screw clamps, double clamp holders and leg holders ---------- Each	80.00



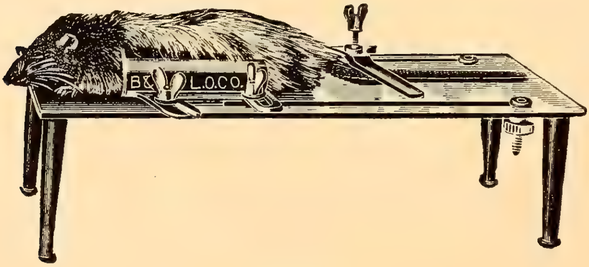
10240

10240	**Animal Holder—Operating Board—Latapie's.** As used in Pasteur Institute for rabbits, guinea pigs, pigeons and ducks; consists of flat table with clamps and spring catches, all metal parts nickel plated ---------- Each	55.00



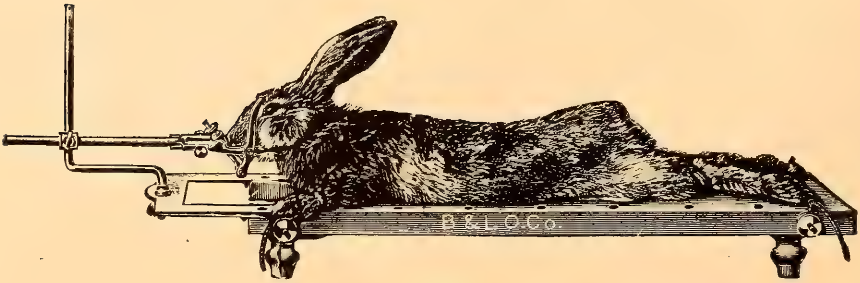
10245

10245 **Animal Holder—Operating Board.** For small animals, latest construction; consists of strong wooden board with metal side bars in which the legs are fastened; head of animal is fastened in the fork, which is then tightened so that fork lies behind the jaw bones...Each 54.00



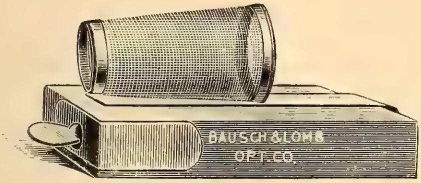
10250

10250 **Animal Holder—Operating Board.** For animals, latest construction; entirely of metal, with adjustable body holder, movable leg and tail clamps .... Each 32.00

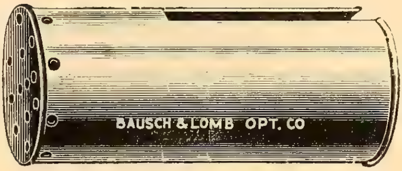


10255

10255 **Animal Holder—Operating Board—Czermack's.** For guinea pigs, rabbits and cats; with adjustable head holder..................Each 25.00



10260

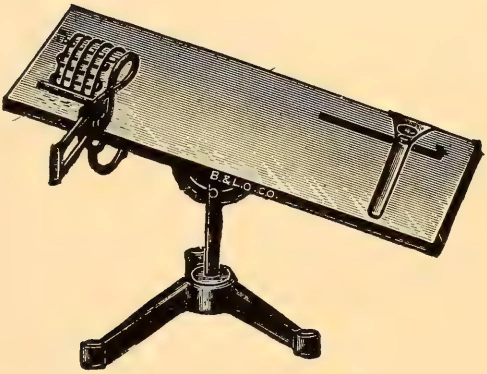


10265

10260	**Animal Holder.** For inoculating mice; made entirely of metal, with adjustable clamp for holding tail of the animal; conical wire cage is detachable and can be renewed	Each	2.00

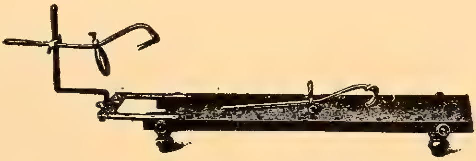
10265 **Animal Holders—Voge's.** For guinea pigs; made of zinc.

No.	A	B
Size of holder, cm	18 x 6	20 x 8
Size of slot, cm	10 x 2	10 x 2.5
Each	1.20	1.50



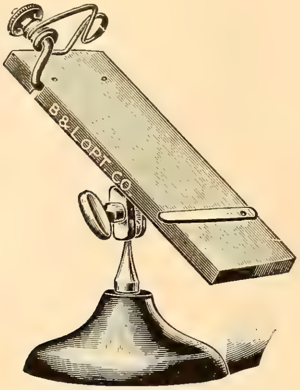
10270

10270	**Animal Holder, Rat—Kitasato's.** With movable, nickeled, metal table, adjustable head holder with neck clamp and adjustable tail holder	Each	15.00

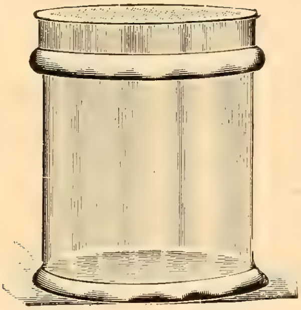


10275

10275	**Animal Holder—Tatin's.** For guinea pigs, rats, etc.; of metal, with two head holders as shown in illustration	Each	12.00



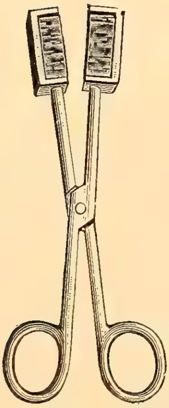
10280



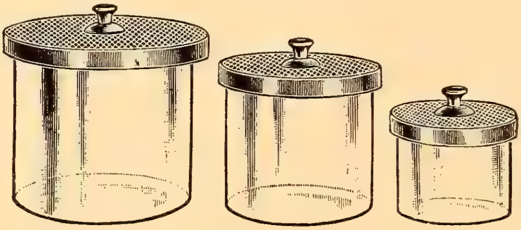
10285

10280 **Animal Holder—Kitasato's Autopsic.** For mice; consists of nickel-plated, metal plate with spring clamp for fastening the animal by skin of the neck, and a spring clip for holding the tail or leg; plate may be supported in any position by ball and socket joint on pillar, as shown in illustration .... Each 2.50

10285 **Animal Holder.** For mice; consists of cylindrical jar with nickel-plated cover, having woven wire center; cover is held on by a catch and can be released only by turning it around to proper point; no extra weights required; provided with ground label for writing data .... Each 2.50



10295

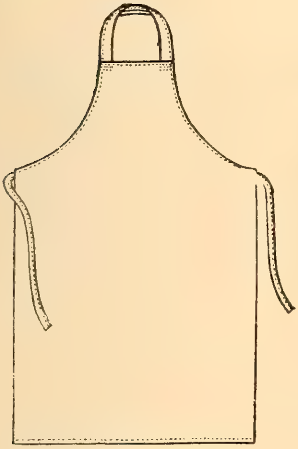


10290

10290 **Animal Jars.** Smaller sizes for mice and larger for guinea pigs and rabbits; top of heavy galvanized wire with weight; same jars may be fitted with close-fitting tops of mosquito and flea-proof gauze at additional cost.

No.	A	B	C
Height, cm	41	28	23
Diameter, cm	41	28	23
Each	**10.50**	**5.20**	**4.00**

10295 **Animal Tongs.** Cork-lined; for handling mice .... Each **1.60**



10305

10335

10310

10300	**Apron—Asbestos.** Fire and acid-proof	Each	6.50

10305 **Aprons.** Of rubber cloth; desirable for protecting clothes.

No.	A	B	C
Length, in.	45	48	50
Each	2.50	2.50	2.50

10310 **Asbestos Board.** Fire and acid-proof; in sheets 1 meter square.

No.	A	B	C	D	E	F	G	H
Thickness, mm	.75	1.5	2.25	3	5	6	9	12
Weight, kilos	.75	2	2.50	3.50	5	7	10.5	14

Per lb.—**35c** to **$1.00**, depending upon quantity ordered.

10315 **Asbestos Board.** Cut in squares.

No.	A	B	C	D	E	F
Thickness, mm	.75	.75	.75	1.5	1.5	1.5
Size, mm	100	125	150	100	125	150
Per dozen	.18	.25	.35	.30	.45	.60

10320	**Asbestos Cement.** Fire and acid-proof, ready for use	Per 5-lb. can	1.00

10325 **Asbestos Cloth.** Fire and acid-proof; width, 90 cm (1 yd.).

No.	A	B	C
	Fine	Medium	Heavy
Weight, lbs., per yd.	1½	2¼	2¾
Per yd.	4.00	5.50	6.50

10330 **Asbestos Cord or Twine.** For wrapping handles of apparatus which become hot, and for suspending crucibles, retorts, etc., in contact with fire.

No.	A	B	C
Diameter, mm	1	1.5	3
Per lb.	2.50	2.50	2.50

10335	**Asbestos Mittens.** Fire and acid-proof	Per pair	5.75

10340

10340 **Asbestos Pads.** Square, bound with metal; thickness, 1.5 mm.

No.	A	B	C	D
Size, mm	75	100	125	150
Each	.30	.35	.40	.45

10345 **Asbestos Pads.** Square, bound with metal; thickness, 3 mm.

No.	A	B	C	D
Size, mm	75	100	125	150
Each	.35	.40	.45	.50

10350 **Asbestos Pads.** Square, bound with metal; for use under heated vessels, etc.

No.	A	B	C	D	E
Size, mm	165	200	250	330	500
Each	.60	.75	1.10	1.65	2.25

10355 **Asbestos Pads.** Oblong, bound with metal.

Size, mm	250 x 150	350 x 250	500 x 350
Each	.60	1.00	1.40

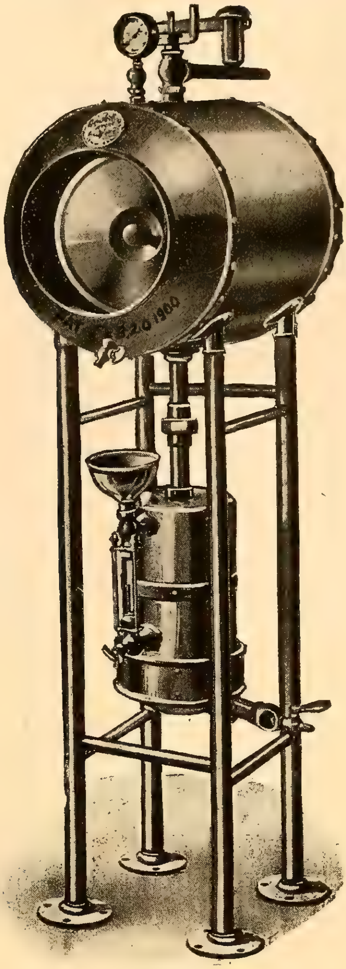
10360 **Asbestos Paper.** For filtering acids, etc.; of pure, white fiber; in sheets 90 cm square ---Per lb. .50

10365 **Asbestos Paper.** Extra thin; in sheets, 225 x 350 mm----------Per lb. .50

10370 **Asbestos Wood—Ebony.** Will fill long-felt want of chemist or laboratory worker, being impervious to acids of all kinds and having withstood severest tests; made of asbestos fiber and hydraulic cements, impregnated with an asphaltic compound, proven by experience to be distinctly superior to alberene stone, slate or any other material for use in laboratories; supplied in standard-sized sheets, 36 x 48 in. and 42 x 96 in., and in thicknesses indicated below.

No.	A	B	C	D	E	F	G
Thickness, in.	⅛	3/16	¼	5/16	⅜	½	⅝
Weight per sq. ft., lbs.	1.5	2.08	2.75	3.5	4.25	5.43	6.88
Each	1.10	1.45	1.55	1.75	1.90	2.30	2.80

No.	H	I	J	K	L	M	N
Thickness, in.	¾	⅞	1	1¼	1½	1¾	2
Weight per sq. ft., lbs.	7.85	9	10.35	12.85	15	17.8	20.65
Each	3.00	3.20	3.35	3.75	4.40	4.75	7.50



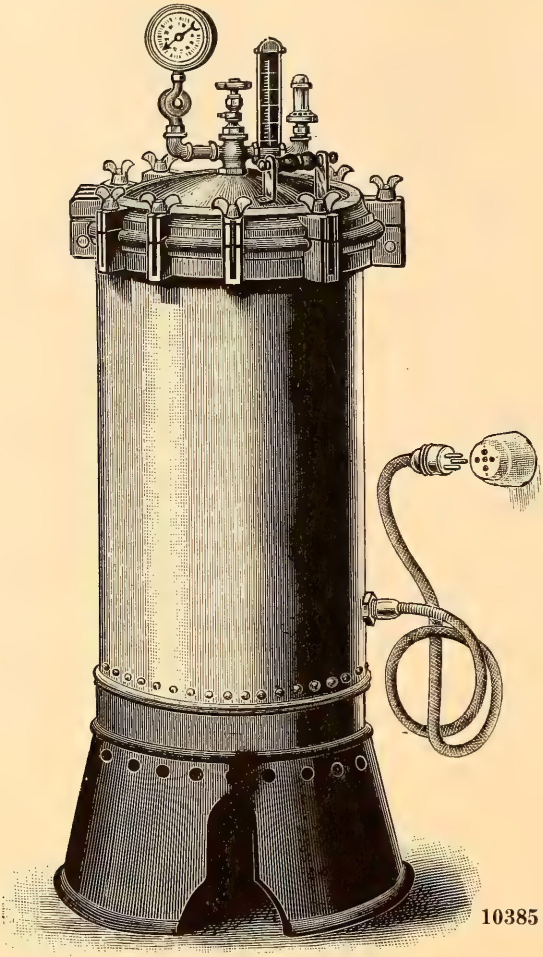
10375

10375 **Autoclaves, Eclipse—With Horizontal Chamber.** Cylindrical in form, differing from steam pressure sterilizer principally in method of jacketing; made of heavy, polished copper, with double wall; inner door of solid, cast brass, rolling on track inside instrument; each autoclave fitted with interior shelf, water gauge, pressure gauge and safety valve, and mounted on white enameled iron stand as illustrated; either gas, steam, petroleum, acetylene gas or other fuel may be used for heating, and method to be employed should be stated when ordering; autoclave may be used as ordinary free steam sterilizer by leaving air-cock open, which will prevent accumulation of steam and maintain a temperature of 100°C.

No.	A	B	C	D	E
Length, inside, cm	71	71	61	51	41
Diam., inside, cm	63	56	51	41	30
Diam., Door Opening, inside, cm	41	35	30	25	20
Each	**416.00**	**313.00**	**238.00**	**188.00**	**163.00**
Boxing, extra	**10.00**	**10.00**	**7.50**	**7.50**	**7.50**

10380 **Autoclaves, Eclipse—With Horizontal Chamber.** Same as No. 10375 above, but nickel-plated.

No.	A	B	C	D	E
Length, inside, cm	71	71	61	51	41
Diam., inside, cm	63	56	51	41	30
Diam., Door Opening, inside, cm	41	35	30	25	20
Each	**447.00**	**338.00**	**256.00**	**200.00**	**173.00**
Boxing, extra	**10.00**	**10.00**	**7.50**	**7.50**	**7.50**



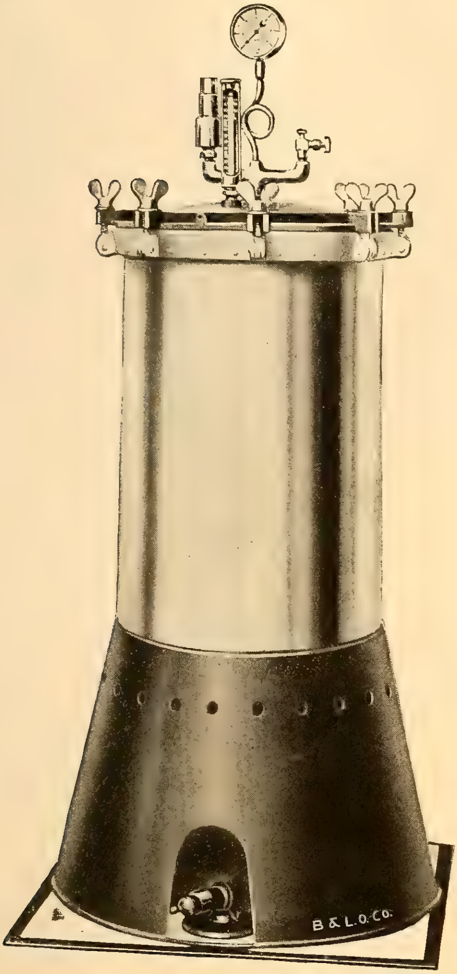
10385

10385 Autoclaves—With Riveted Boiler. Designed for sterilization under steam pressure; boiler made of heavy, polished copper, tin-lined, with spun bottom and provided with perforated tray having two shelves; lid of cast brass, nickel-plated and fitted with ground joint, no washers being required to make it steam-tight; hinged lid is supplied on everp apparatus of the larger size and is optional on the small sizes; provided with pressure gauge, thermometer and safety valve and tested and guaranteed to withstand pressure of 35 lbs. per square inch; supplied with either gas or electric equipment, as indicated; for gas heating a larger burner is provided; **for electric equipment be sure to state voltage and current when ordering.**

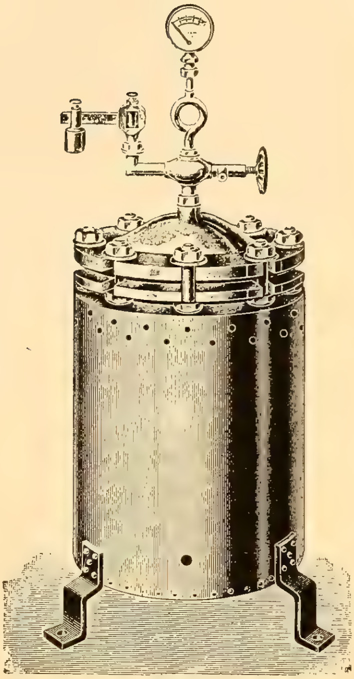
No.	A	B	C	D	E	F
	Gas	Electric	Gas	Electric	Gas	Electric
					With Hinged Lid	
Depth, inside, cm	67	67	60	60	60	60
Diam., inside, cm	35	35	28	28	28	28
Height, inside, cm	115	115	100	100	100	100
Each	**121.50**	**202.50**	**93.75**	**157.50**	**97.50**	**161.25**

10390 Autoclaves—With Riveted Boiler. Same as No. 10385 above, but nickel-plated.

No.	A	B	C	D	E	F
	Gas	Electric	Gas	Electric	Gas	Electric
					With Hinged Lid	
Depth, inside, cm	67	67	60	60	60	60
Diam., inside, cm	35	35	28	28	28	28
Height, inside, cm	115	115	100	100	100	100
Each	**127.50**	**208.50**	**99.75**	**163.50**	**103.50**	**168.00**



10395



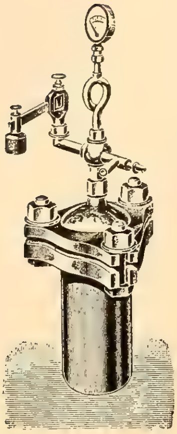
10400

10395 Autoclaves—With Seamless Boiler. Designed for the sterilization of material at high temperatures obtained by steam under pressure; made from a single, drawn shell of solid copper, which construction is best for providing a steam-tight chamber and most durable for service; bottom protected by a sheet of metal, upon which the flame plays from a powerful burner; cover made of cast brass, ground with bevel joint and made tight by clamping bolts, the number of which varies with size of the autoclave, supplied with or without hinge as indicated; finished in unpolished nickel, with inner surface tinned; articles to be sterilized are supported on a rack, which has one or more shelves, depending upon the size of sterilizing chamber; copper shell finished in bright lacquer; this autoclave is strongly recommended for all work requiring apparatus of such a pattern.

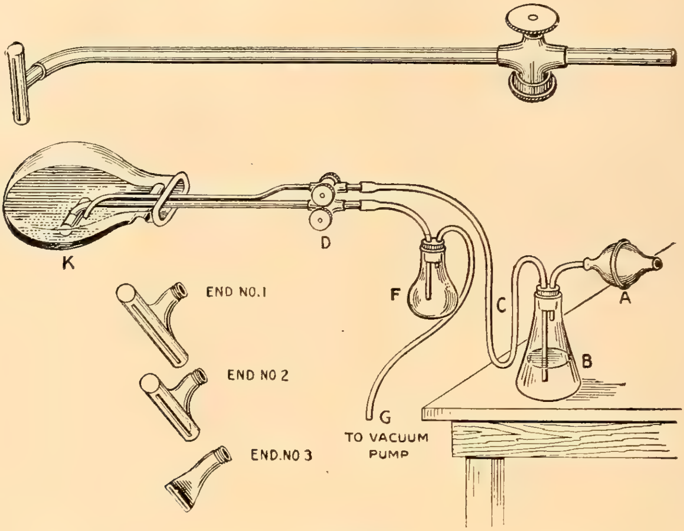
No.	A	B	C	D	E	F
	With Hinged Cover			Cover Without Hinge		
Height, inside, cm	66	50	30	66	50	30
Diameter, inside, cm	33	25	20	33	25	20
Each	**123.00**	**98.00**	**77.00**	**119.00**	**94.00**	**73.00**

10400 Autoclaves—High Pressure. For pressure up to 25 atmospheres; of very heavy construction, with copper bodies and cast brass heads.

No.	A	B	C
Depth, cm	20	25	30
Diameter, cm	10	12½	15
Each	192.00	216.00	240.00



10403



10405

10403 **Autoclaves—High Pressure.** For pressure up to 25 atmospheres; without stands; intended for use on tripods.

	A	B	C	D
Depth, cm	10	12½	15	20
Diameter, cm	7½	10	10	12½
Each	144.00	156.00	168.00	192.00

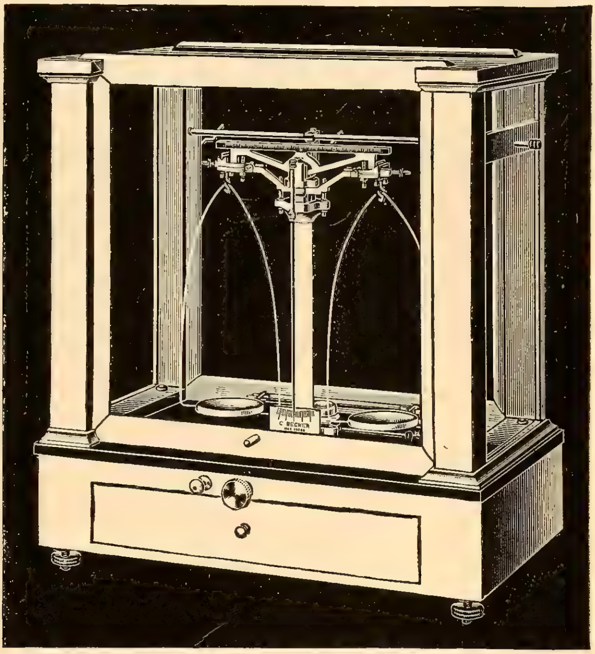
Bacterial Collector—Vacuum. Designed for the Army Medical School; made in **plain** and **combination** forms, as illustrated; lower illustration shows combination form and position in connection with Kolle flask as receptacle for the colony growth; a few pressures on rubber bulb "A" develops pressure in flask "B"; this pushes the sterile water therein through tube "C," and on pressing the upper valve of this tube at "D" a small amount of water is deposited on the agar in Kolle flask "K"; scraper mixes this with the culture, and by pressure on lower valve at "D" all of this material is immediately sucked through tube by the vacuum pump, accumulating in bottom of flask "F"; supplied with three ends, as illustrated.

10405	**Plain Collector**	Each	10.00
10406	**Combination Collector**	Each	17.25

		No. 1	No. 2	No. 3
10407	**Extra Ends, each**	1.45	1.30	.85

BALANCES

Analytical — Assay — Prescription — Specific Gravity
Hand — Cream — Every Description

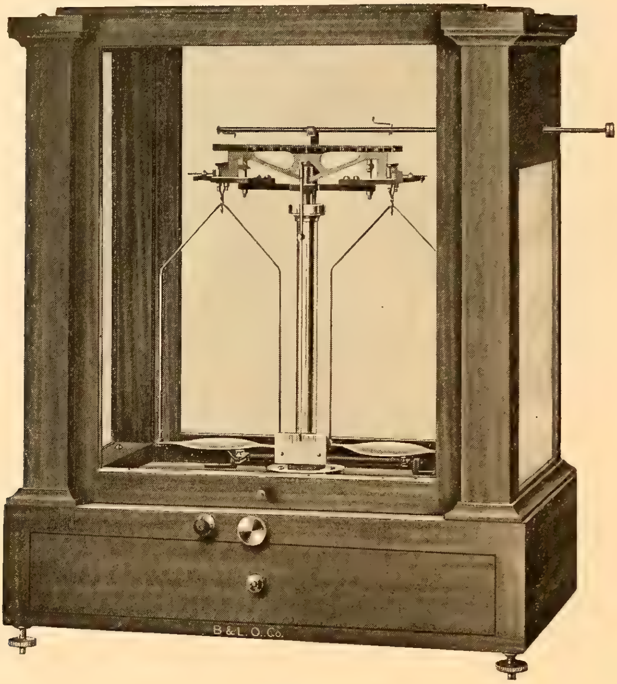


10410

10410	**Balance, Analytical—Becker's.** Capacity, 200 grams—sensitiveness, 1/10 mg; diameter of pans, 3 in.; length of beam, 6 in.; bearings, agate; knife edges, agate; aluminum beam graduated in 1/10 mg. with white graduations on black background; independent arrest for pans with automatic stop; width of pan support, 4 in. (wider if specified); polished mahogany and glass case, glass top and front sliding frame counterpoised; dimensions of case: 16¼ in. long, 9 in. wide, 18½ in. high; mounted on plate glass base ____________Each	110.00
10415	**Balance, Analytical—Becker's.** Same as No. 10410 above, but without plate glass base ____________Each	100.00

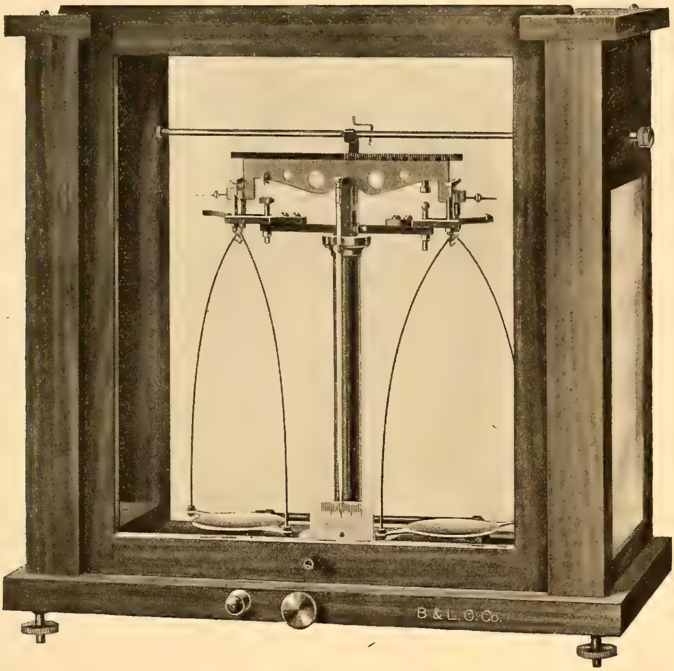
The Balances listed herein are but a few that were considered as being applicable to the pathological laboratory. No endeavor has been made towards completeness as we will publish shortly a "Balance and Weights" catalog in which we will list all standard types of the various makes. This we would be pleased to send to all whose requirements are not covered by this catalog.

Dairy, moisture test and centrifuge tube balances are listed under "Milk Testing Apparatus" and "Centrifuges," respectively.



10420

10420	**Balance, Analytical—Voland's Senior Model.** Capacity, 200 gm in each pan; sensitiveness, 1/10 mg under full load; knife edges and bearings of finest Russian agate, accurately ground; beam, specially hard rolled aluminum, 6 in. long, graduated center (zero point) to each end, in white inlaid on black background; hangers, 4 in. wide; pans, 2½ in. in diameter; triple beam arrest with drop movement; rider carrier operates over entire beam without obstruction, and patented rider hooks prevent rider from dropping back on shank of hook; column base, circular with two vial levels always in view of operator; red graduated index plate above column base has black pointer tip, red graduations having been proved to be most easily read, as established by the U. S. Government, which now insists on red graduations; case, of mahogany with sliding doors, the front counterpoised, the rear removable; 4-in. space in front of column base accommodates set of weights inside case; mounted on plate glass base--------Each	**93.00**
10425	**Balance, Analytical—Voland's Senior Model.** Same as No. 10420 above, but without plate glass base --------------------------------Each	**85.00**
10430	**Balance, Analytical—Voland's Professional Model.** Same as No. 10420 above, but adjusted to sensitiveness of 1/20 mg; mounted on plate glass base --Each	**96.00**
10435	**Balance, Analytical—Voland's Professional Model.** Same as No. 10430 above, but without plate glass base ---------------------------Each	**88.00**



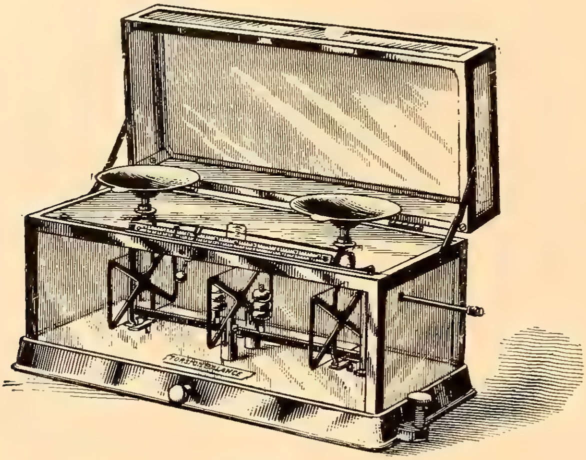
10440

10440 **Balance, Analytical—Voland's Junior Model.** Especially suitable for quantitative analysis in the educational laboratory, because of its accuracy, durability and quick action, combined with reasonable price; capacity, 200 gm in each pan; sensitiveness, 1/10 mg under full load; knife edges and bearings of agate; beam of aluminum, right arm graduated into 1/5 mg, in white inlaid on black background; hangers, 7¾ in. high and 4¼ in. wide; pans, 2½ in. in diameter; arrest supports, beam and hangers with freedom from contact between edges and bearings; release by single action, making contact of center and end knives with bearings simultaneous; self-locking pan arrests with adjustable push-button; rider-carrier runs in support above column in addition to side wall opening; patented rider hook prevents rider from dropping back on shank of hook; plummet suspended at back of column with adjusting point for leveling; red graduated index plate above column base at front has black pointer tip, red graduations being most easily distinguished and now demanded by the U. S. Government; case of mahogany, with counter-poised front door--Each 47.50

CALCIUM CHLORIDE, ANHYDROUS

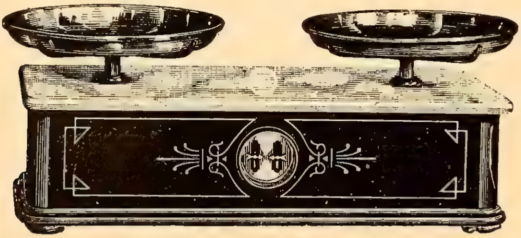
A superior product, white and of uniform composition, without free alkali.

Admirable for keeping balances dry.



10445

10445 **Balance, Torsion—Prescription Model.** Capacity, 120 gm; sensitiveness, 2 mg; pans of German silver, 75 mm in diameter; rider beam graduated on upper edge from 1/8 to 8 grains and on lower edge from 5 mg to 5½ decigrams; in glass case with cover________________Each 60.00



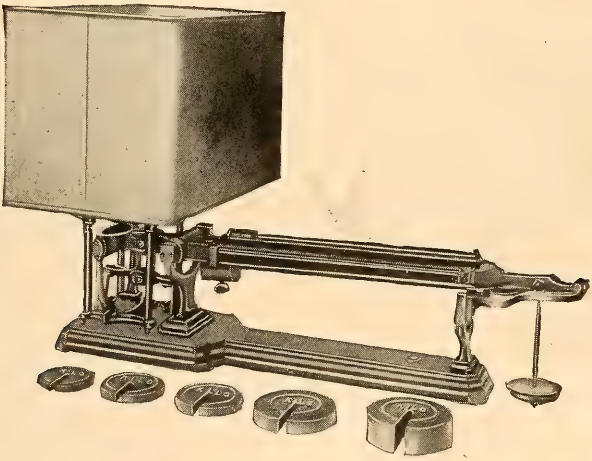
10450

10450 **Balances, Troemner's.** Mounted in ebony box, with glass graduated dial and white marble top; heavy, nickel-plated pans; gold-lined, carved decorations on box.

No.	A	B	C
Capacity, lbs.	5	8	10
Diameter of pans, in.	7	8	9
Sensitiveness, gr	20	20	20
Each	24.00	27.75	31.50

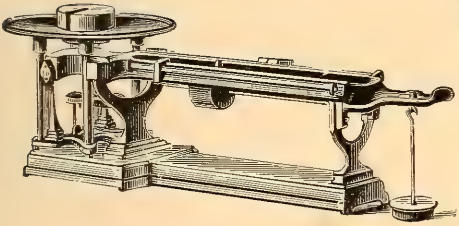
GLASSWARE?

We carry a complete line of Laboratory Glassware. Send for our Catalogue G-1. It is a convenient laboratory companion.

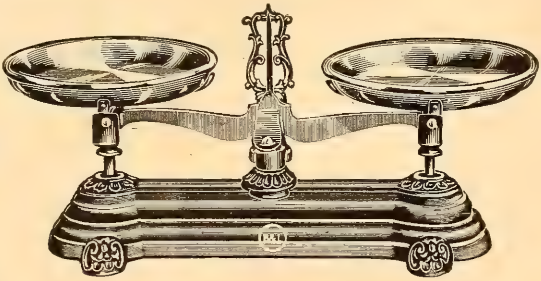


10455

10455 **Balance, Troemner's Animal.** Designed for weighing animals in the bacteriological laboratory; graduated in the metric system from 1 gm to 20 kilos; fitted with galvanized iron box, which can be removed and the balance used for ordinary weighing by means of the flat, iron plate, with which it is furnished; size of box, 45 x 30 x 30 cm; diameter of plate, 27½ cm; capacity, 20 kilos; sensitiveness, 1 gm. ---Each **91.00**



10460

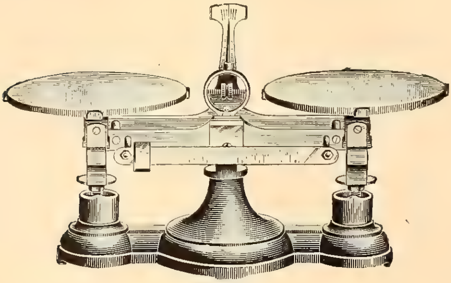


10465

10460 **Balance, Solution—Troemner's.** Designed for weighing liquids with accuracy; capacity, 20 kilos; sensitiveness, 1 gr; two weighing beams and sliding poises, one divided into 100 parts, each of which represents 1 gm; other beam divided into 10 parts, each representing 1 gm; a bar with sliding poise is placed under the weighing beams for balancing the empty containers --Each **75.00**

10465 **Balances, Robervahl's.** Substantially constructed; finished in dark brown, ornamented with gold lines; fitted with heavy, brass pans, upright indicator and graduated ivory index scale.

No.	A	B	C
Capacity, lbs.	1	2	5
Sensitiveness, gms.	10	15	20
Diameter of pans, in.	5½	8	9
Each	**12.00**	**13.25**	**16.00**



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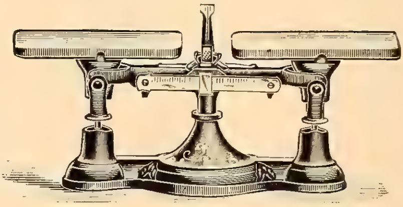
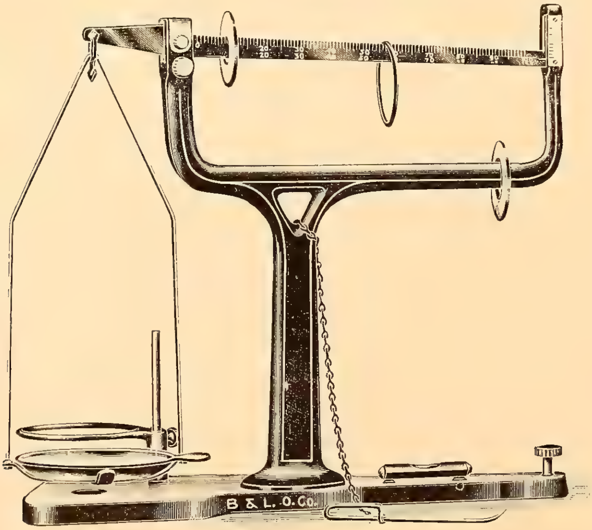


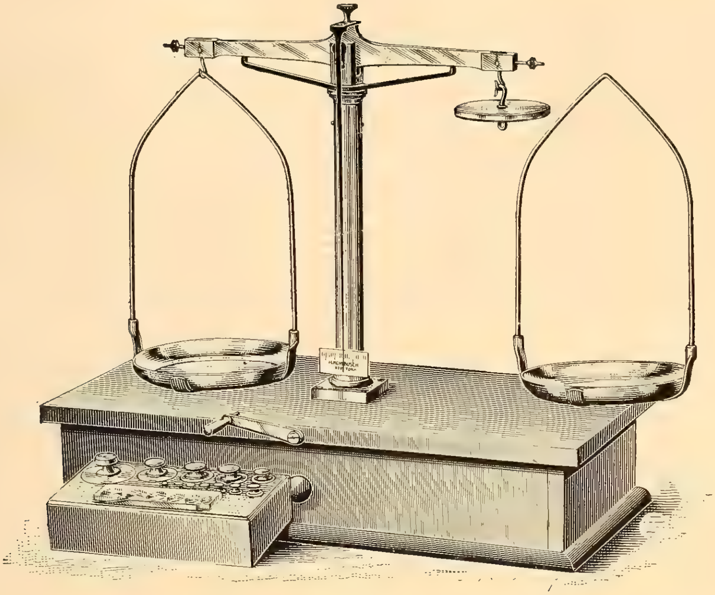
10475-76

10470	**Balance, Improved Trip Scale—Harvard Design.** Rough cast and forged iron parts have been replaced by parts of brass and steel, properly formed by tools and machinery, making them uniformly accurate and assembled with a degree of rigidity heretofore impossible; bearings consist of hardened, steel prisms, resting on six agate shelves of large dimensions; graduated beam has range of 10 gm in 1/10 gm divisions; capacity, 2 kilos; sensitiveness, after continued use, guaranteed to 1/10 gm, but actual tests have shown sensitiveness greater than 0.01 gm	Each	10.00
10475	**Balances—Harvard Trip.** Excellent for general laboratory use; capacity, 1 kilo; sensitiveness, 1/10 gm; beam graduated up to 10 gm in 1/10 gm divisions; has two porcelain plates 150 mm square	Each	7.50
10476	Same as above, but graduated in oz.	Each	7.50
10477	Same as No. 10475, but round plate	Each	7.50
10478	Same as No. 10476, but round plate	Each	7.50



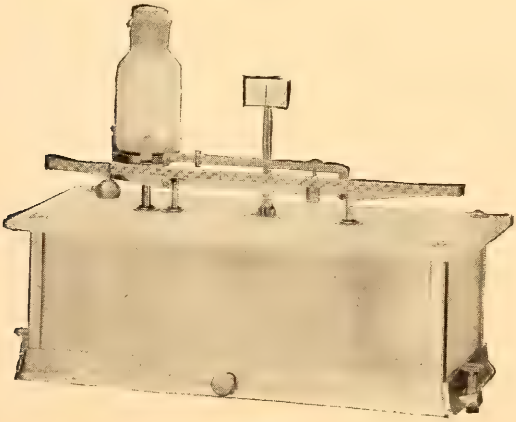
10480

10480	**Balance—Chaslyn.** Featured by accuracy, sensitiveness, simplicity, rapidity of weighing and general utility; sensibility, 10 mg; capacity, 200 grm; smallest reading, 1 ctgrm; bearings of hardened steel; beam graduated and provided with two ring weights, one indicating 1 grm and the other .01 grm for each division; has arrest for beam and adjustable plate for supporting a beaker of water in specific gravity work; weights are not removable; base has spirit level and leveling screws; balance is supplied with three ring weights, the largest indicating 100 grms when placed on last division of beam	Each	20.00



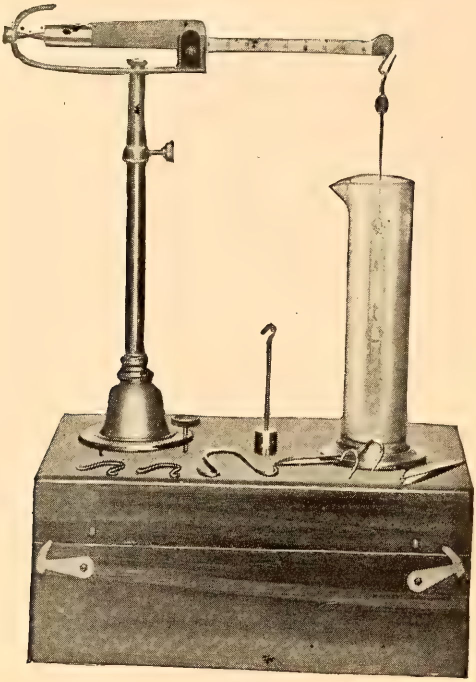
10485

10485 **Balance—Specific Gravity, Hydrostatic.** Especially designed for school and commercial use; capacity, 1 ctgrm to 1 kilo; length of beam, 250 mm; diameter of pans, 135 mm; mounted on base with drawer and supplied complete with set of brass weights, 1 ctgrm to 500 grms; scale may be used for usual weighing by substituting the scale bow for the counterpoised pan ------------------------------------Each 20.00



10490

10490 **Balance, Specific Gravity.** Designed for the ready determination of specific gravity of liquids, readings being taken direct from the beam, without calculations or the use of loose weights; range, from 0.7000 to 1.4000; upper beam graduated to 0.01 by 0.0001 and lower beam from 1.40 to 0.70 by 0.01; sensitiveness, 2 mg; supplied in glass case, metal bound; complete with 100 cc bottle ----------------Each 65.00

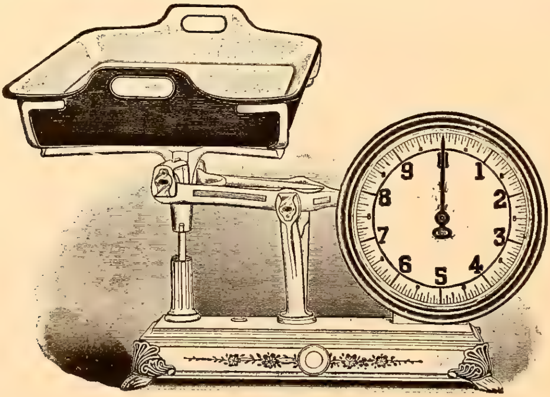


10495

10495 **Balance, Specific Gravity—Westphal's.** For determining specific gravity of both liquids and solids; made of aluminum and furnished in plush-lined, portable case, with jar, riders, plummet, pincets and weight ---------- Each 32.50

Plummet only, for No. 10495 above ---------- Each 12.00

Rides only, for No. 10495 above ---------- Per set of 8 3.00



10500

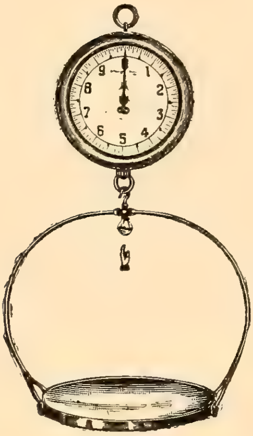
10500 **Balance, Spring.** Fitted with agate bearings, 200 mm dial and marble plate, 275 mm square.

	No. A	B	C
Capacity, kilos	2	5	10
Divisions, gm	10	25	50
Each	25.00	25.00	25.00

10505 **Balances, Spring.** Same as No. 10500 above, but white enamelled.

	No. A	B	C
Capacity, kilos	2	5	10
Divisions, gm	10	25	50
Each	27.50	27.50	27.50

10510


10515

10510	**Balance, Spring.** Especially designed for autopsy purposes; capacity, 9 kilos by 10 gm; fitted with 325 mm dial, graduated to 3 kilos by 10 gm; making three revolutions for the total capacity; has white enamelled, removable pan, 280 x 12 mm, brass, nickel-plated bows and swivels	Each	17.50
10515	**Balance, Spring.** Designed for autopsy work; capacity, 15 kilos by 20 gm; fitted with 200 mm dial, porcelain enamelled pans, 325 mm in diameter, German silver rims and nickel-plated bows	Each	12.50

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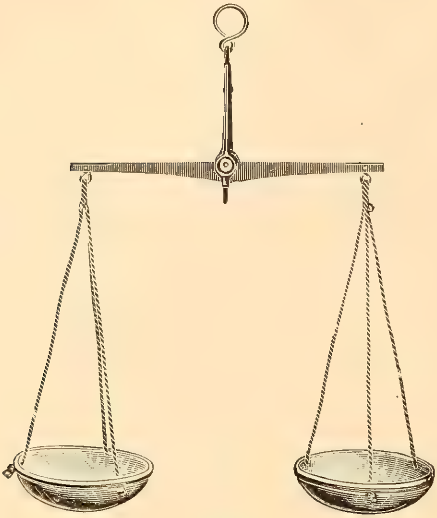
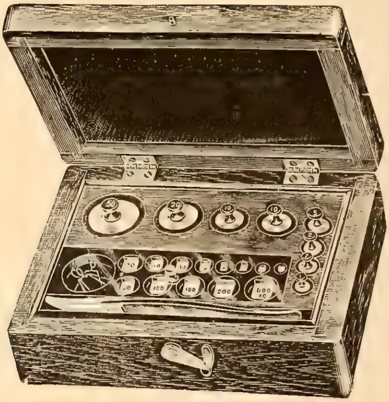
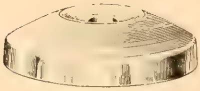


10520



10540



10535

10520 **Balances, Hand.** Brass beam; horn pans and silk cords; steel knife edges.

No.	A	B
Length of beam, mm	150	175
Diameter of pans, mm	65	75
Each	2.25	2.50

10525 **Balance—Hand.** Has brass beam, horn pans and silk cords; beam is graduated on one side of center to 30 grains, in ½ grain sub-divisions, and is provided with sliding weight ________________________Each 4.20

10526 **Balance—Hand.** Same as No. 10525 above, but beam graduated to 25 ctgrm in ½ ctgrm sub-divisions ____________________________Each 3.50

Balance Desiccator—See Desiccators.

10530 **Balance Pans.** For hand scales; of horn, with green silk strings.

No.	A	B	C	D	E	F	G	H
Diameter, mm	25	50	65	75	90	100	115	125
Per set	.40	.60	.80	1.00	1.20	1.60	1.80	2.20

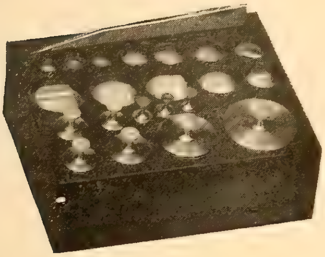
10535 **Balance Rests.** Of glass; to place under leveling screws of balances. ____Per set of three .45

10540 **Weights, Analytical—Voland's.** First quality; gold-plated, of brass screw-knob type; accurately adjusted; for general use; fractions from 500 to 50 mg are platinum, from 20 to 1 mg, aluminum; each weight fitted in separate compartment in mahogany, velvet-lined box, with loose or hinged cover.

No.	A	B	C	D	E	F	G
Grams	10	20	50	100	200	500	1000
Milligrams	1/10	1	1	1	1	1	1
Riders	--	3	3	3	3	3	3
Per set	21.50	23.00	25.00	28.00	37.00	44.00	53.00

10545

10550



10555

10545 Weights, Analytical—Voland's. Second grade; made of brass, in two pieces, polished and lacquered; fractionals of German silver and aluminum; furnished in mahogany box with hinged cover.

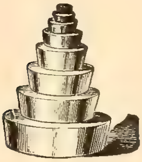
No.	A	B	C	D	E	F	G
1 mg to	10	20	50	100	200	500	1000 gm
Per set	8.50	9.50	12.00	14.00	17.00	20.00	27.00

10550 Weights, Analytical—Troemner's. Second grade; made of brass, with tapered body and screw knob, all adjustment being made on the knob stem with no loose balancing material being used; weights polished and lacquered; fractionals of sheet aluminum, with one entire side turned up to facilitate handling; furnished in natural, mahogany block with hinged lid, each weight in a separate compartment.

No.	A	B	C	D	E	F	G
1 mg to	10	20	50	100	200	500	1000 gm
Per set	11.00	13.50	16.00	17.00	20.50	25.00	30.00

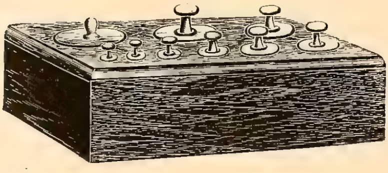
10555 Weights, Analytical—Troemner's. Same as No. 10550 above, but furnished in box without lid.

No.	A	B	C	D	E	F	G
1 mg to	10	20	50	100	200	500	1000 gm
Per set	9.50	11.00	13.25	14.50	18.00	23.00	29.00

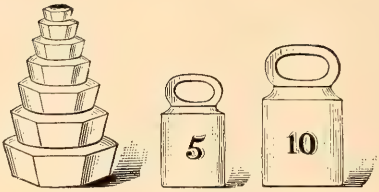


10585

10560



10570



10575

10560 **Weights, Fractional.** Made of platinum; first quality.

No.	A	B	C	D	E	F	G	H	I	J
Mg	1	2	5	10	20	50	100	200	500	1000
Each	**.60**	**.60**	**.60**	**.60**	**1.00**	**1.50**	**2.00**	**3.00**	**4.50**	**8.00**

10565 **Weights, Fractional.** Made of aluminum.

No.	A	B	C	D	E	F	G	H	I
Mg	1	2	5	10	20	50	100	200	500
Per set	**.25**	**.25**	**.25**	**.40**	**.40**	**.40**	**.45**	**.50**	**.55**

10570 **Weights—Voland's.** Ordinary grade; brass, lacquered.

No.	A	B	C	D	E	F
10 mg to	20	50	100	200	500	1000 gm
Per set	**3.00**	**3.75**	**4.25**	**6.00**	**9.00**	**15.00**

10575 **Gram Weights.** Of iron; for coarse weighing.

No.	A	B	C	D	E
Sets, 10 gm to	1	2	5	10	20 kilos
Per set	**4.25**	**5.80**	**11.00**	**18.00**	**30.00**

10580 **Weights, Iron.** Same as No. 10575 above, but supplied singly, as follows:

No.	A	B	C	D	E	F
Grams	10	20	50	100	200	500
Each	**.25**	**.25**	**.36**	**.48**	**.50**	**.72**

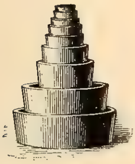
No.	G	H	I	J	K
Kilos	1	2	5	10	20
Each	**.85**	**1.60**	**5.00**	**7.50**	**13.25**

10585 **Weights, Avoirdupois.** Made of iron, frosted nickle finish; for course weighing.

No.	A	B	C	D	E	F
Sets, ¼ oz. to	2	6	8	10	16	25 lbs.
Per Set	**1.40**	**2.30**	**2.60**	**3.05**	**3.95**	**5.60**

10590 **Weights, Avoirdupois.** Same as No. 10585 above, but of polished brass.

No.	A	B	C	D	E	F
Sets, ¼ oz. to	2	6	8	10	16	25 lbs.
Per Set	**6.45**	**13.65**	**18.85**	**20.45**	**30.05**	**45.25**



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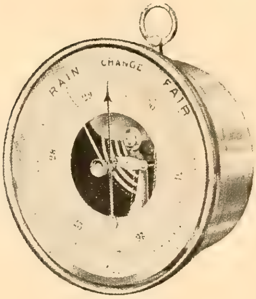

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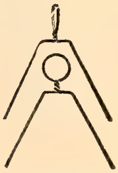


10595

10591 **Weights, Metric—Standard.** Of polished brass, for coarse weighing.

No.	A	B	C	D	E
Sets, 5 gms to	1	3	5	8	12½ kilos
Per Set	7.30	14.80	22.05	31.80	47.30

10592 **Weights, Metric—Standard.** Of iron, frosted nickel finish, for coarse weighing.

No.	A	B	C	D	E
Sets, 5 gms to	1	3	5	8	12½ kilos
Per Set	1.85	2.75	3.50	4.40	6.05

10595 **Weights—Riders.** Of platinum.

No.	A	B	C	D	E
Mg	.5	.6	1	1.2	2
Each	.60	.60	.50	.50	.50

No.	F	G	H	I	J
Mg	3	5	6	10	12
Each	.50	.30	.30	.30	.30

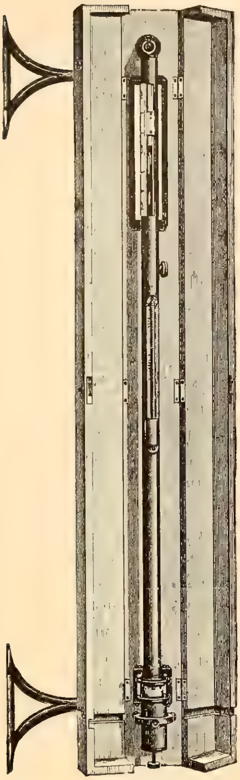
10600 **Weights—Riders.** Same as No. 10595 above, but of aluminum.

No.	A	B	C	D	E
Mg	.5	.6	1	1.2	2
Each	.60	.60	.50	.50	.50

No.	F	G	H	I	J
Mg	3	5	6	10	12
Each	.50	.30	.30	.30	.30

10605 **Barometer—Aneroid.** Compensated for temperature and absolutely accurate; supplied to U. S. Navy, U. S. Weather Bureau and many scientific and educational institutions; is practically non-corrosive, nickel-steel or phosphor-bronze parts being used wherever practicable, instead of steel; lacquered-brass case, open-center silvered metal dial, engraved and divided with great accuracy.

No.	A	B
Diam. of dial, in.	5	6
Each	20.00	25.00



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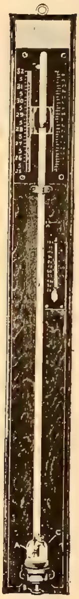
1210



10615

10610 **Barometer—Fortin's.** Most substantial and accurate instrument; length, 40 in.; graduated in inches and millimeters, and can be read to 0.01 in. and 0.1 mm; tube is made of gun metal, mounted on polished, hardwood back, with thermometer attached to tube; provided with sliding vernier, operated by screw on side; scale is made of white porcelain, with black figures, and cannot discolor as all metal scales do ....Each 60.00

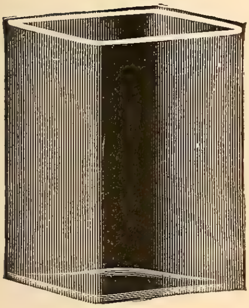
10615 **Barometer—Fortin's Principle.** Consists of straight, glass tube of heavy wall and uniform bore, mounted in hexagonal brass, protecting case and provided with screw adjustment for changing level of mercury in cistern; scales are readable by means of vernier to 1/10 mm and 1/200 in.; lowest possible reading is 25 in. (63.5 cm), so that barometer is not satisfactory for altitudes above 4,000 ft.; complete with thermometer having both Centigrade and Fahrenheit scale ....Each 25.00

10620 **Barometer—Fortin's Principle.** Same as No. 10615 above, but with scale reading down to 20 in.; for use in altitudes up to 10,000 ft. ....Each 30.00

1210 **Battery Jars.** Of clear, white glass, with ground rim.

No.	A	B	C	D	E	F	G
Capacity, liters	¾	1	1½	3½	2	3½	2½
Height, mm	100	125	150	150	175	200	228
Diameter, mm	100	100	115	200	125	150	115
Each	**.50**	**.60**	**.80**	**1.15**	**.95**	**1.15**	**1.40**

No.	H	I	J	K	L
Capacity, liters	8	3	4	10	16
Height, mm	240	275	225	300	375
Diameter, mm	200	125	150	200	225
Each	**2.00**	**1.20**	**1.40**	**2.10**	**3.50**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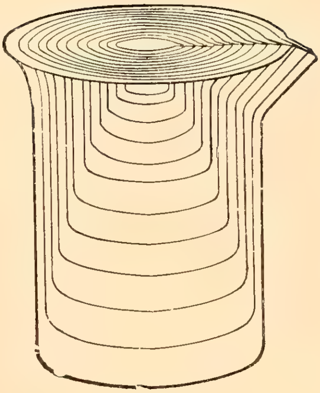
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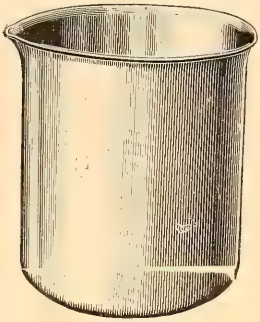

10625

1215 **Battery Jars.** Square form; with straight, ground top.

No.	A	B	C	D	E	F
Capacity, oz.	6	27	29	30	32	57
Height, in.	4	5	4	6	7	8
Length, in.	1½	3½	4	2½	2½	4
Width, in.	1	3½	4	4¼	4¼	4
Each	.30	.35	.35	.50	.50	.60

10625 **Beakers, Aluminum.** Of superior finish.

No.	A	B	C	D	E
Capacity, cc	125	250	500	1000	2000
Each	.65	.80	1.15	1.60	4.00

10630 **Beakers, Copper.** Polished.

No.	A	B	C	D	E
Capacity, cc	125	250	500	1000	2000
Each	.75	.90	1.35	1.80	4.50

10635 **Beakers, Copper.** Nickel-plated.

No.	A	B	C	D	E
Capacity, cc	125	250	500	1000	2000
Each	.90	1.15	1.60	2.25	5.00

1220 **Beakers.** Of Pyrex glass; Griffin's low form, with lip.

No.	A	B	C	D	E
Capacity, cc	30	50	100	150	250
No. pieces in original case	312	216	156	156	168
Each	.18	.18	.19	.21	.25

In full case lots, less 10% discount.

No.	F	G	H	I	J
Capacity, cc	400	600	800	1000	1300
No. pieces in original case	84	72	48	48	24
Each	.30	.35	.40	.54	.65

In full case lots, less 10% discount.

No.	K	L	M	N	O
Capacity, cc	1500	2000	2500	3000	4000
No. pieces in original case	24	12	12	10	10
Each	.73	.98	1.20	1.40	1.80

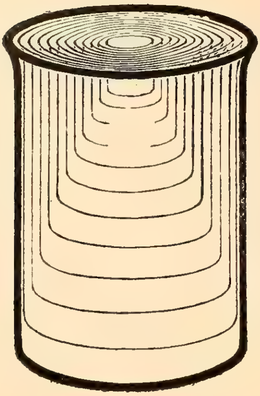
In full case lots, less 10% discount.

1225 **Beakers.** Of resistance glass; Griffin's low form, with lip.

No.	A	B	C	D	E	F
Capacity, cc	30	60	90	120	150	180
No. pieces in original case	216	216	156	156	156	168
Each	.13	.13	.14	.15	.16	.18

No.	G	H	I	J	K	L
Capacity, cc	250	300	350	400	500	600
No. pieces in original case	168	168	84	84	84	72
Each	.19	.20	.23	.24	.28	.29

No.	M	N	O	P	Q
Capacity, cc	700	800	1000	1400	2000
No. pieces in original case	72	48	48	24	12
Each	.33	.37	.44	.60	.90



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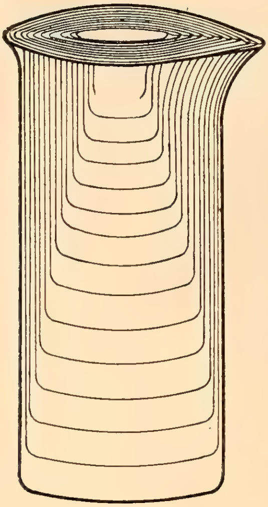


1240

1235 Beakers. Of Pyrex glass; Griffin's low form, without lip.

No.	A	B	C	D	E
Capacity, cc	30	50	100	150	250
No. pieces in original case	312	216	156	156	168
Each	.18	.18	.19	.21	.25

In full case lots, less 10% discount.

No.	F	G	H	I	J
Capacity, cc	400	600	800	1000	1300
No. pieces in original case	84	72	48	48	24
Each	.30	.35	.40	.54	.65

In full case lots, less 10% discount.

No.	K	L	M	N	O
Capacity, cc	1500	2000	2500	3000	4000
No. pieces in original case	24	12	12	10	10
Each	.73	.98	1.20	1.40	1.80

In full case lots, less 10% discount.

1240 Beakers. Of Pyrex glass; usual form, with lip.

No.	A	B	C	D	E
Capacity, cc	100	150	200	300	400
No. pieces in original case	156	120	168	144	60
Each	.19	.21	.23	.26	.30

In full case lots, less 10% discount.

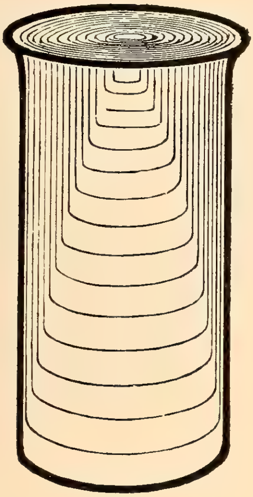
No.	F	G	H	I
Capacity, cc	500	600	800	1000
No. pieces in original case	60	48	48	36
Each	.32	.35	.38	.54

In full case lots, less 10% discount.

1245 Beakers. Of resistance glass; usual form, with lip.

No.	A	B	C	D	E	F
Capacity, cc	30	60	90	120	180	250
No. pieces in original case	216	216	156	120	168	144
Each	.13	.13	.14	.15	.18	.19

No.	G	H	I	J	K	L
Capacity, cc	300	350	500	700	1000	1200
No. pieces in original case	144	60	60	48	36	36
Each	.20	.23	.28	.33	.44	.55



1250

1257

1250 **Beakers.** Of Pyrex glass; usual form, without lip.

No.	A	B	C	D	E
Capacity, cc	100	150	200	300	400
No. pieces in original case	156	120	168	144	60
Each	.19	.21	.23	.26	.30

In full case lots, less 10% discount.

No.	F	G	H	I
Capacity, cc	500	600	800	1000
No. pieces in original case	60	48	48	36
Each	.32	.35	.38	.54

In full case lots, less 10% discount.

1255 **Beakers.** Of resistance glass; usual form, without lip.

No.	A	B	C	D	E	F
Capacity, cc	30	60	90	120	180	250
No. pieces in original case	216	216	156	120	168	144
Each	.13	.13	.14	.15	.18	.19

No.	G	H	I	J	K	L
Capacity, cc	300	350	500	700	1000	1200
No. pieces in original case	144	60	60	48	36	36
Each	.20	.23	.28	.33	.44	.55

1257 **Beakers.** Phillips' conical shape, of resistance glass, low form, with lip.

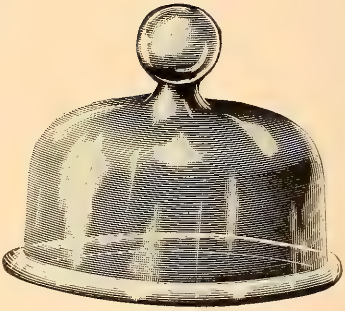
No.	A	B	C	D	E
Capacity, cc	100	250	500	750	1000
Each	.12	.15	.25	.35	.40

1258 **Beakers.** Phillips' conical shape, of resistance glass, low form, without lip.

No.	A	B	C	D	E
Capacity, cc	100	250	500	750	1000
Each	.12	.15	.25	.35	.40

1275

5510



1280

5510 Beakers. Of Coors porcelain; with lip, glazed inside and outside except outside bottom surface.

Size No.	1	1a	2	3
Diameter rim, mm	62	66	74	87
Diameter body, mm	52	60	65	78
Height, mm	93	108	118	143
Capacity, cc	165	250	340	580
Each	**1.02**	**1.20**	**1.32**	**1.62**

Size No.	3a	4	5	6
Diameter rim, mm	93	103	114	122
Diameter body, mm	83	93	104	110
Height, mm	154	167	198	209
Capacity, cc	700	970	1500	1775
Each	**1.98**	**2.40**	**3.30**	**5.10**

1275 Bell Glasses—High Form. With ground rim; larger sizes very useful for covering microscopes, etc.

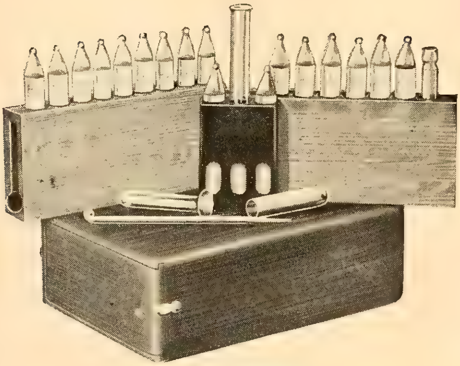
No.	A	B	C	D	E	F
Capacity, liters	½	1	2	3	4	9
Height, mm	150	200	225	275	350	375
Diameter, mm	75	100	125	150	165	175
Each	**1.15**	**1.45**	**1.90**	**2.50**	**2.75**	**3.50**

No.	G	H	I	J	K	L	M	N	O
Capacity, liters	6	8	9	10	12	14	16	18	20
Height, mm	325	350	375	325	425	425	450	450	450
Diameter, mm	200	200	200	215	215	225	225	240	250
Each	**3.80**	**4.00**	**4.25**	**4.60**	**5.00**	**5.50**	**6.00**	**7.00**	**10.80**

1280 Bell Glasses—Low Form. Of heavy, clear, white glass, with ground rim.

No.	A	B	C	D	E
Height, mm	40	55	90	100	110
Diameter, mm	75	100	125	150	175
Each	**.75**	**.90**	**1.20**	**1.60**	**2.00**

No.	F	G	H	I	J
Height, mm	125	150	200	250	275
Diameter, mm	200	225	250	300	400
Each	**2.50**	**2.80**	**4.00**	**5.60**	**8.75**



10640

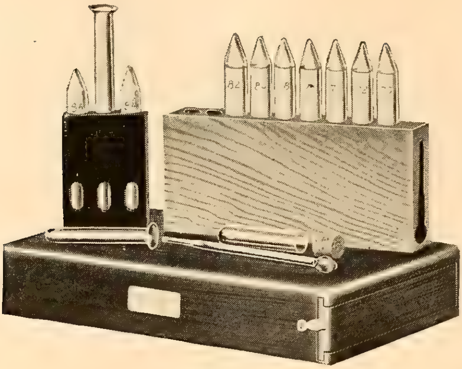
Blood Testing Apparatus

10640 **Acidosis Combination Outfit.** For determining the alkali reserve of blood plasma and carbon dioxide tension of alveolar air, according to method described by Dr. W. McKim Marriott; **Alkali Reserve Outfit** consists of set of nine sealed, non-soluble glass tubes, containing standardized phosphate solutions colored with phenolsulphonephthalein, numbered 7.0, 7.2, 7.4, 7.6, 7.8, 8.0, 8.2, 8.4, 8.6, respectively; also one dialyzing tube, one tube for making sacs, one tube for aeration, one capillary nozzle and 100 cc of phenolsulphonephthalein in 0.8 per cent sodium chloride indicator solution; **Alveolar Air CO2 Tension Outfit** consists of set of eight glass tubes filled with standardized, phosphate solutions colored with phenolsulphonephthalein and numbered 10, 15, 20, 25, 30, 35, 40 and 45 mm, respectively; also one long glass test tube, paraffined stoppers, one capillary nozzle, one glass mouth piece, 100 cc of sodium bicarbonate indicator solution, pipette, rubber bag, bulb and pinchcock; the two outfits described above, with metallic comparison box and two color tubes furnished in polished, wooden case, 2½ x 5 x 6½ in., with the phenolsulphonephthalein and sodium bicarbonate indicator solutions, complete_Each 12.50

Additional Articles Required. For alkali reserve estimations: Collodion solutions for sacs; for CO2 tension estimations: an improvised or special mask for comatose patients and infants. Prices furnished on application.

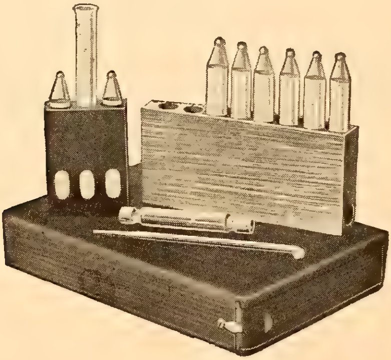
10645

10645 **Agglutometer.** For the diagnosis of typhoid fever; designed to obviate use of microscope and fresh, live typhoid bacilli necessary for the Widal test when made in the old way; has been proved equal in delicacy to former method; consists of one bottle of sterile, permanent suspension of typhoid bacilli, four test tubes, one lancet and tube for collecting blood, one vial for diluting serum, one small pipette for distributing diluted serum, one large, graduated pipette for measuring diluting fluid and for filling test tubes with suspension, paper discs as an alternate method of making dilution; furnished complete with directions ____Per set 2.00



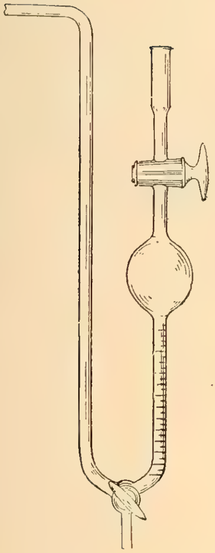
10650

10650 **Alkali Reserve Determination Outfit.** For blood plasma; consists of set of nine sealed, non-soluble glass tubes, containing standardized phosphate solutions colored with phenolsulphonephthalein, numbered 7.0, 7.2, 7.4, 7.6, 7.8, 8.0, 8.2, 8.4, 8.6, respectively; also one non-soluble, dialyzing tube, one tube for making sacs, one tube for aeration, one capillary nozzle tube and 100 cc of phenolsulphonephthalein in 0.8 per cent. sodium chloride indicator solution.............Each 6.50



10655

10655 **Alveolar Air Testing Outfit.** Consists of set of eight, non-soluble, glass tubes, with standardized phosphate solutions, colored with phenolsulphonephthalein and numbered 10, 15, 20, 25, 30, 35, 40 and 45 mm, respectively; also one long, non-soluble glass test tube, one non-soluble, glass capillary nozzle, one metallic comparison box, designed to hold the specimen and two color tubes, one 1000 cc rubber bag, one rubber bulb, one pinchcock, one glass mouthpiece and 100 cc of standardized sodium bicarbonate indicator solution.........Each 8.50



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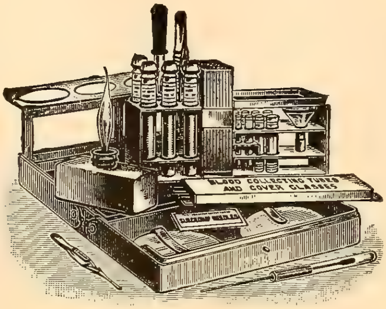
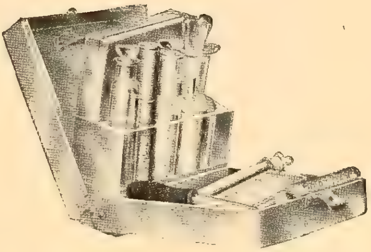
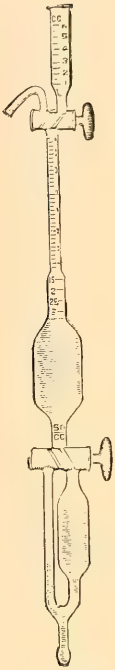


10670

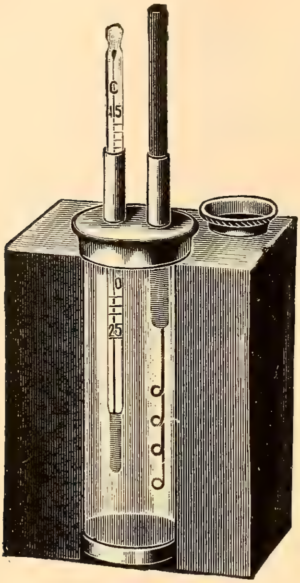


10675

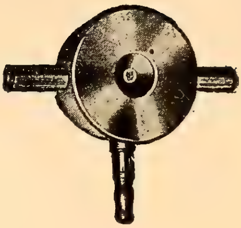


10665

10660	**Apparatus for Determination of CO2 in Alveolar Air.** So-called Fredericia Apparatus; glass part only mounted on black, vulcanite back	Each	13.20
	Glass Part only for No. 10660 above	Each	12.00
	Jar only for No. 10660 above	Each	2.40
10665	**Apparatus for Determination of CO2 and Oxygen in Blood Plasma—Van Slyke's.** Provides a very practical and reliable index of the condition of the blood in conditions of acidosis, such as occur in diabetes, nephritis, etc.; complete on stand, with leveling bulb, rubber tube, separatory funnel and two pipettes	Each	24.00
	Glass Parts only, for No. 10665 above, as illustrated	Each	12.00
	Glass Parts only, for No. 10665 above, as illustrated, but mounted	Each	15.00
10670	**Bacteriological Analysis Case.** Enables medical men to carry out examinations formerly submitted to laboratory workers; is sufficiently small and light to be readily carried into sick chamber in order to obtain blood specimen or throat swab; case contains three stoppered bottles of methyl alcohol, dr. 1½, absolute alcohol, dr. 1½, and distilled water, dr. 1½, one rod-stoppered bottle of canada balsam, one graduated pipette, covere-glass forceps and dissecting forceps, twelve microscopic slides, one spirit-lamp, one glass funnel, two watch glasses, one metal case of needles (straight No. 9), one packet of filter papers, supply of blood-collecting pipettes, 50 cover slips, one glass rod for powdering microscopic stains, etc., one sterile swab, one tube each of the following "Soloid" stains: Eosin, Methyl Violet, Fuchsin, Romanowsky Stain, Eosin-Methylene Blue, Methylene Blue, Haemulum, Toison Blood Fluid; all in nickel-plated metal case, easily rendered aseptic; complete with doeskin cover	Each	16.75
10675	**Bacteriological Blood Test Case.** Contains required items for bacteriological examination of blood, including "Soloid" Romanowsky Microscopic Stain (Leishman's Powder) one 20 cc dropping bottle of distilled water, two 10 cc stoppered phials of methyl alcohol, one cc pipette, grease-pencil and vest-pocket case, which may be withdrawn from larger case, containing six microscopic slides and Hagedorn needle immersed in carbolised alcohol; dimensions, 4¼ x 3½ x 1½ in.; all in nickel-plated metal case, complete with doeskin cover	Each	11.70



10680



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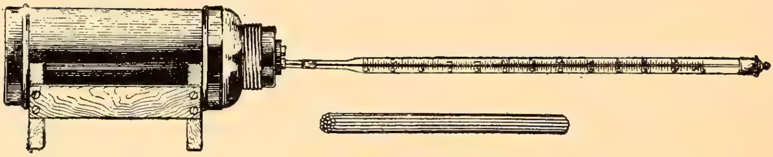
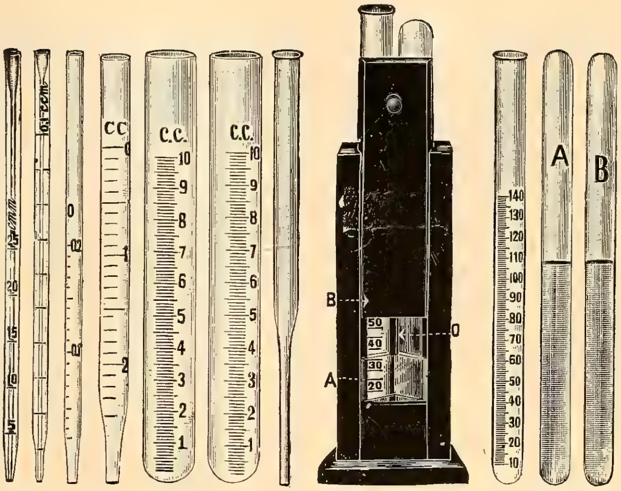


10690

10680 **Coagulometer—Biffi-Brooks.** A simple apparatus for determining the coagulation time of blood, of great clinical importance, both medical and surgical; obviates the difficulties presented by earlier instruments because of its extreme simplicity of manipulation, enabling it to be operated successfully by anyone familiar with the object to be determined; renders a test within a few minutes, giving most accurate results; is easily portable, permitting it to be used at bedside as well as in office or laboratory, and is so constructed as to be easily cleaned; dimensions: 3½ in. high, 2⅝ in. wide and 1¾ in. deep; furnished complete, with nickel-plated case, aluminum rod with platinum loops and thermometer; has been presented before the Medical Section of the New York Academy of Medicine and the New York Pathological Society and is successfully used in leading institutions throughout the United States ________________________Each **12.00**

10685 **Coagulometer—Brodie-Russell-Boggs.** For use on microscope stage in determining exact time of blood coagulation ________________Each **10.00**

10690 **Coagulometer—Rudolph's.** Consists of pint Thermos bottle, with 3-hole, rubber stopper; through two holes are brass tubes, 7 in. long, in which are inserted thin glass tubes, 1.5 mm in diameter and about 7 in. long, each containing blood from same drop; outer ends of tubes are sealed with flame; thermometer is placed in third hole of stopper; complete with wooden support for Thermos bottle__Each **10.00**



10695

10695 **Colorimeter, Universal—Kuttner's.** For the examination of blood and urine, or other physiological fluids, as clinical aid to the correct diagnosis of disease; instrument consists of closed, upright casing of hard rubber, 2.5 cm x 8.5 cm, with two openings at top for the color tube and calibrated tube and a window near the lower front part, provided with a Helmholtz double plate prism, which serves the purpose of having the colors of both tubes appear close together, forming one continuous color band; prism is easily removed for cleaning, can be quickly readjusted and is protected from dust and injury by a sliding door, which can be raised and lowered; color standard and calibrated tube are separated from each other by a partition, which prevents light from being reflected from one tube to the other; the usual instability of standards, and consequent inaccuracy is obviated by making use of small, hermatically sealed tubes containing only mineral substances in solution, which are stable; outfit consists of colorimeter in casing, as described, four pipettes of 25 cmm, 0.1 cc, 0.2 cc and 2 cc, two graduated test tubes of 10 cc, transferring pipette and graduated solution tube of 140 cmm, complete in pocket carrying case with sufficient space for number of standard color tubes ------------------------------Each 18.00

Standard Color Solution Tubes, extra:

Hemoglobin Test, regular standard tube	Each	2.00
Hemoglobin Test, Carbon Monoxide (Co-Hgb) 100 = 20% O2 tube	Each	5.00
Sugar Test in Blood		
Standard Tube A	Each	1.25
Standard Tube B	Each	1.25

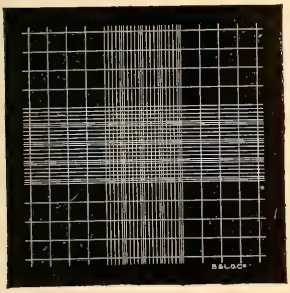
Separate Parts for Colorimeter, No. 10695 above:

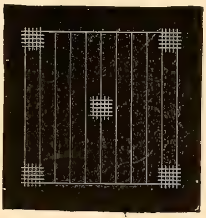
Colorimeter Housing of hard rubber, with prism	Each	10.00
Pipette, 25 cmm	Each	1.50
Pipette, 0.1 cc	Each	1.25
Pipette, 0.2 cc	Each	1.25
Pipette, 2 cc	Each	1.25
Test Tube, graduated 10 cc	Each	1.00
Transferring Pipette	Each	.30
Solution Tube, graduated 140 cmm	Each	1.50
Pocket Carrying Case, with sufficient space for a number of standard color tubes	Each	3.00

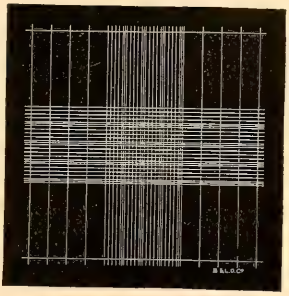
10713

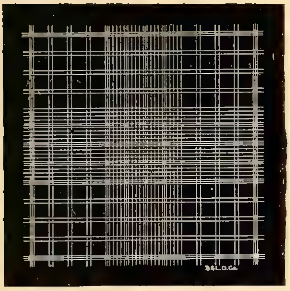
Haemacytometer—Bausch & Lomb. Designed with a view to obtaining absolute accuracy, being guaranteed fully as to accuracy, workmanship and material; mixing pipettes are made of best capillary tubing available and are carefully graduated to meet demand of the medical practitioner; each pipette is supplied with rubber tubing and mouthpiece; counting chamber is mounted on a substantial glass plate to prevent alteration when microscope stage clips are used; depth of each counting chamber is precisely gauged to 0.1 mm over its entire area; each chamber is supplied with two cover glasses of 0.4 and 0.6 mm thickness, the surfaces of which are guaranteed parallel to an accuracy of within 0.04 mm; rulings supplied are Thoma, Turk, Bass, Zappert-Ewing and Zappert-Neubauer.

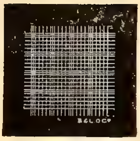
10713	**Haemacytometer** with **Thoma** counting chamber and pipettes for both red and white corpuscles, complete in case	Each	12.00
10716	**Haemacytometer** with **Zappert-Ewing** counting chamber and pipettes for both red and white corpuscles, complete in case	Each	13.75
10719	**Haemacytometer** with **Turk** counting chamber and pipettes for both red and white corpuscles, complete in case	Each	13.75
10722	**Haemacytometer** with **Zappert-Neubauer** counting chamber and pipettes for both red and white corpuscles, complete in case	Each	14.25
10725	**Haemacytometer** with **Bass** counting chamber and pipettes for both red and white corpuscles, complete in case	Each	16.25
10728	**Haemacytometer** with **Double Neubauer** counting chamber and pipettes for both red and white corpuscles, complete in case	Each	15.50
10731	**Thoma Counting Chamber,** without case	Each	6.00
10734	**Zappert-Ewing Counting Chamber,** without case	Each	7.50
10737	**Turk Counting Chamber,** without case	Each	7.50
10740	**Zappert-Neubauer Counting Chamber,** without case	Each	8.00
10743	**Bass Counting Chamber,** without case	Each	10.00
10746	**Double Neubauer Counting Chamber,** without case	Each	10.00
10749	**Mold Counting Chamber,** with ¾ in. unruled disc, without case	Each	5.50
10752	**Thoma Mixing Pipettes** for red corpuscles for dilutions in the ratio of 1:100 (with rubber tube and glass mouthpiece, $0.25 extra)	Each	2.25
10755	**Thoma Mixing Pipettes** for white corpuscles for dilution in the ratio of 1:10 (with rubber tube and glass mouthpiece, $0.25 extra)	Each	2.25
10758	**Rieder Mixing Pipettes** for white corpuscles for dilution in the ratio of 1:20, with rubber tube and glass mouthpiece	Each	3.25
10761	Case for **Counting Chamber** only	Each	1.00
10764	Case for complete **Haemacytometer** with two pipettes	Each	2.00


Zappert-Neubauer


Bass


Zappert-Ewing


Turk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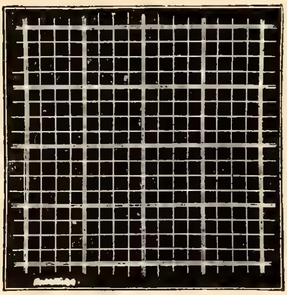
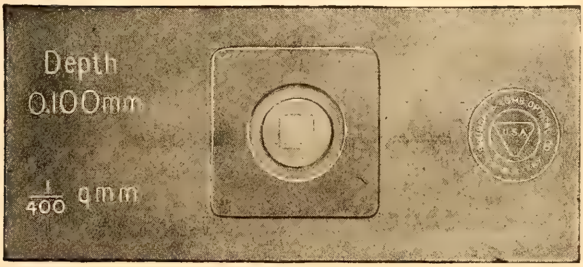
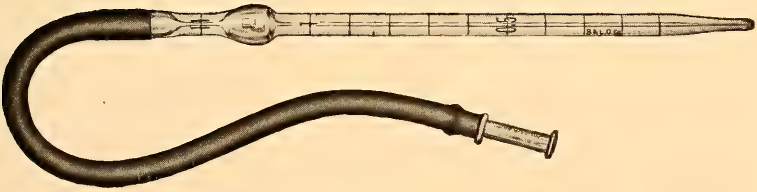

Fuchs-Rosenthal

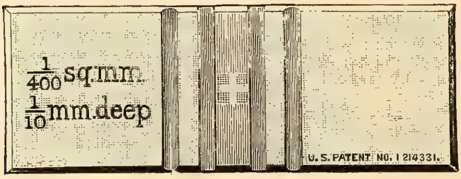


10731

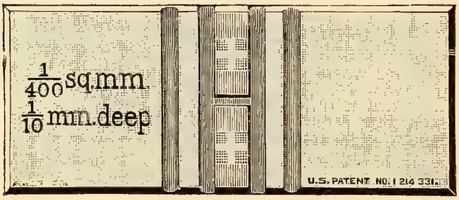


10752

10767	Cover Glasses for Counter Chamber, plane polished, 0.4 mm thick, 24 x 24 mm	Each	.40
10770	Cover Glasses for Counting Chamber, plane polished, 0.4 mm thick, 20 x 26 mm	Each	.40
10773	Cover Glasses for Counting Chamber, plane polished, 0.6 mm thick, 24 x 24 mm	Each	.40
10776	Cover Glasses for Counting Chamber, plane polished, 0.6 mm thick, 20 x 26 mm	Each	.40
10779	Cover Glasses for Counting Chamber, plane polished, 0.18 mm thick, reinforced with glass ring	Each	2.00
10782	Cover Glass for Mold Counting Cell, 0.6 mm, 33 x 33	Each	1.00
10785	Cover Glass for Mold Counting Cell, 1.0 mm, 33 x 33	Each	1.00



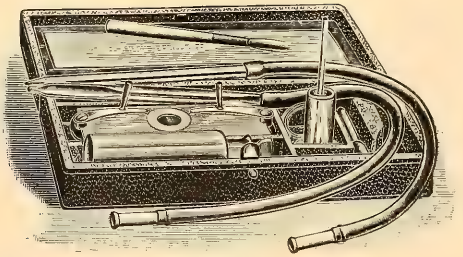
10787-A



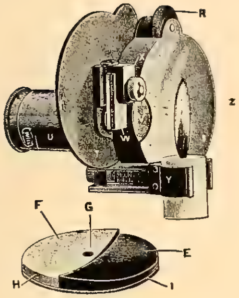
10787-C

10787 **Counting Chamber, Levy's, with Neubauer Ruling. For counting white and red corpuscles.** This chamber is a modification of the Thoma-Zeiss chamber and differs in that the ruling is on a rectangular strip of glass extending entirely across the slide between two parallel moats instead of on a circular disk on the slide in the center of a circular cell also cemented on the slide. The technic is the same as with the Thoma-Zeiss chamber. Cemented cells are eliminated, blood cells are more uniformly represented and distributed, cleaning is facilitated. The matte finish on the surface of the slide provides for better approximation. Furnished with or without Bureau of Standards certificates.

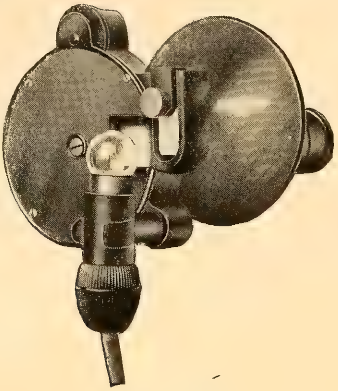
A—**Counting Chamber, Levy's, with Single Neubauer Ruling,** with two cover glasses, without case	Each	7.00
B—**Counting Chamber, Levy's, with Single Neubauer Ruling,** with two cover glasses, without case, with Bureau of Standards certificate	Each	10.00
C—**Counting Chamber, Levy's with Double Neubauer Ruling,** with two cover glasses, without case	Each	10.00
D—**Counting Chamber, Levy's with Double Neubauer Ruling,** with two cover glasses, without case, with Bureau of Standards certificate	Each	14.00
E—**Counting Chamber, Levy's, with Fuchs-Rosenthal Ruling,** for cytological investigations of cerebro-spinal fluids, with counting chamber 0.2 mm deep, with two cover glasses, without case	Each	6.00
F—**Cover Glass,** size 20 x 26 mm, for use with Levy's counting chamber, with double ruling	Each	.30
G—**Cover Glass,** as above, but certified and stamped by the Bureau of Standards. Size, 20 x 21 mm	Each	.50
H—**Cases,** of leather, velvet lined, for counting chamber only. To fit counting chamber with ruling. Single	Each	1.50
I—**Cases,** of leather, velvet lined, for counting chamber only. To fit counting chamber with ruling. Double	Each	1.50



10790

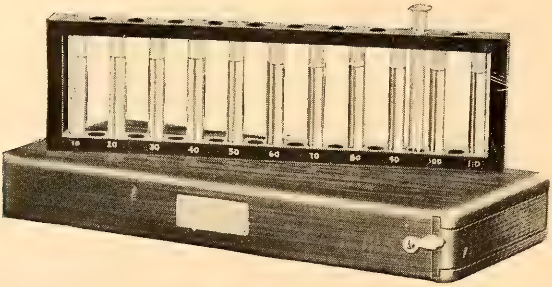


10795



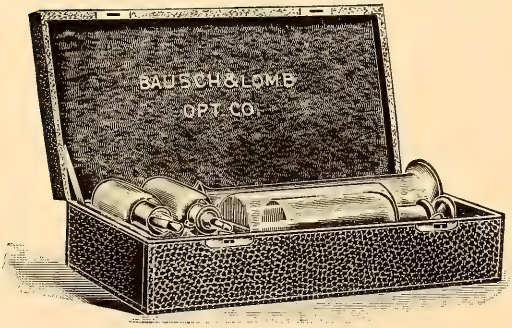
10800

10790	**Haemacytometer—Gower's.** For counting red and white blood corpuscles; apparatus consists of small pipette which will hold 995 cubic mm, capillary pipette large enough for 5 cubic mm with rubber tube and mouthpiece, small glass jar in which the dilution is made, glass stirrer for mixing blood and solution in the glass jar, brass stage plate carrying glass slip on which is a cell 1/5 mm deep; cover glass, kept in place by spring clips, is on top of cell; furnished in case, with minor accessories, including a spear-pointed lancet and full directions for using ---------- Each	30.00
10795	**Haemaglobinometer—Dare's.** For the examination of undiluted blood, designed by Dr. Arthur Dare; consists essentially of automatic pipette, with metal clamp, for collecting blood, and a color comparison scale, graduated from 10 to 120 per cent., to measure the percentage of haemaglobin contained therein; personal equation is reduced and time saved, only one or two minutes being required for complete examination; color scale and blood are presented as fields possessing equal color concentration and density, which adjusts the color curve characteristic of every specimen of blood—an intravascular dilution; blood is viewed against an illuminated white background, which renders the leucocytes luminous and not apparent to the eye; observation is made entirely in camera; photometric candle is used for the standard artificial light, as it gives a perfectly yellow light; complete in case, with directions for use, with candle illumination ---------- Each	30.00
10800	**Haemoglobinometer—Dare's.** Same as No. 10795 above, but electrically illuminated; furnished with transformer to screw in any lamp socket, 8 feet of durable, reinforced cord, bulb, plug and connector ready for use ---------- Each	39.00
10805	**Haemoglobinometer—Dare's.** Similar to No. 10795 above, but with both candle and electric illumination ---------- Each	40.00
10807	**Electrical Camera** adapted to any Dare Haemoglibinometer listed above ---------- Each	9.00
10808	**Certified Pipets** for use with above Haemoglobinometers, Standardized personally by Dr. Arthur Dare ---------- Per Set	1.50
10810	**Haemaglobinometer—Gower's, Simplified Form.** Consists of sealed tube containing standardized solution, graduated comparison tube, capillary pipette and cork wood base; with full directions for use ---------- Each	5.00

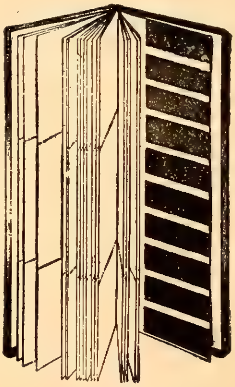


10815

10815 **Haemaglobinometer—Clinical, Haessler-Newcomer.** Compact, convenient arrangement of distinct, standard color tubes for comparison with blood specimens in making rapid and accurate haemaglobin estimations; consists of open specimen tube and eleven sealed, color tubes in hard wood rack, arranged for the introduction of the specimen tube between the color tubes for comparison, and polished, wood carrying case; this interrupted or distinct series of standards will be found decidedly advantageous over a uniformly graded scale, especially in avoiding difficulties of dilution in matching a single standard___Each **8.50**



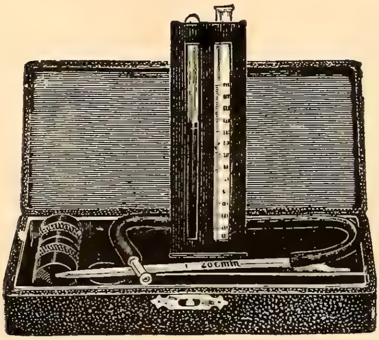
10820



10825

10820 **Haemaglobin Outfit, Physicians'.** For approximate estimation of haemaglobin according to Hammerschlag's specific gravity method; is a simple outfit, which can be carried to the bedside, if desired, and will give sufficiently accurate results for diagnostic purposes; hydrometer is specially graduated with large graduations between the limits given by Hammerschlag's table; outfit, consisting of special hydrometer, hydrometer jar, mixing jar, glass-stoppered bottle, stirring rod and two dropping bottles, furnished complete in carrying case, with directions and table ____________________________________Each **6.25**

10825 **Haemaglobin Scale—Tallquist's.** Consists of color scale of ten tints, ranging from 10 per cent. to 100 per cent., bound in book form, pocket size, with 50 sheets of standard filter paper, sufficient for 150 tests; this haemaglobin test can be used by anyone with sufficient accuracy for practical purposes and with a celerity that makes haemaglobin estimation no more of an undertaking than feeling the pulse; complete, with directions ____________________________________Each **1.75**

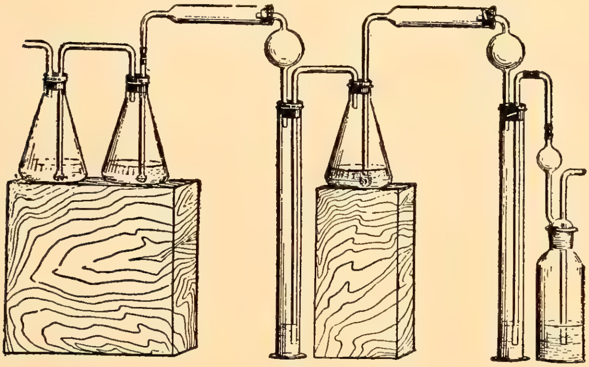


10830

10830 **Haemometer—Sahli's.** Superior to others as regards accuracy and dependable results; standard solution tube does not fade and remains reliable at all times, containing mineral substances and hence guaranteed to maintain its color; complete in case, with Dr. Th. Kuttner's haemaglobin standard ---------- Each 8.50

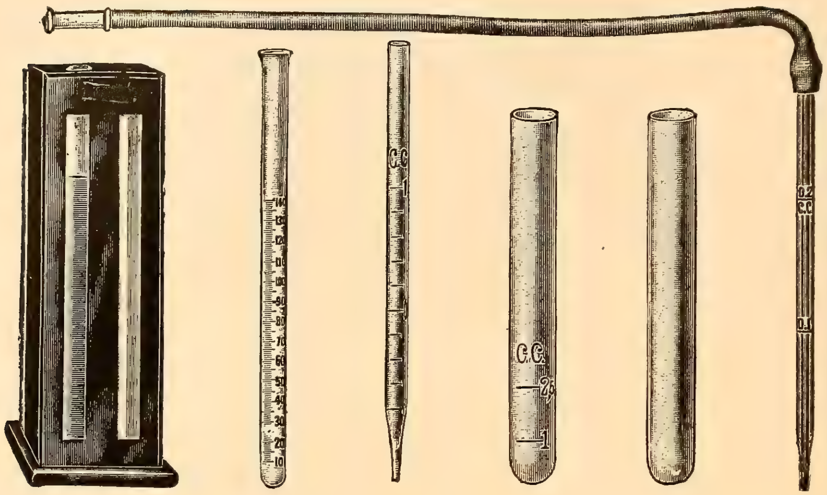
Extra Parts:

Haemaglobin Standard—Dr. Th. Kuttner's	Each	2.00
Graduated Tube, 140 cmm	Each	1.50
Graduated Pipette, 20 cmm	Each	1.50
Hard Rubber Stand	Each	2.00
Hard Rubber Container for blood specimen, with vial and rubber stopper	Each	1.25
Haemometer Case	Each	2.00



10832

10832 **Urea Apparatus—Marshall's.** For blood; consists of three 200 cc, Erlenmeyer flasks with two-hole rubber stoppers, two glass cylinders, 12 x 2 in., with two-hole rubber stoppers, one Dreschel gas washing bottle, two calcium chloride tubes with one-hole rubber stoppers, one filter pump, three special Folin absorption tubes, with necessary connecting tubes of glass and rubber; complete, as illustrated, without supports ---------- Each 6.00



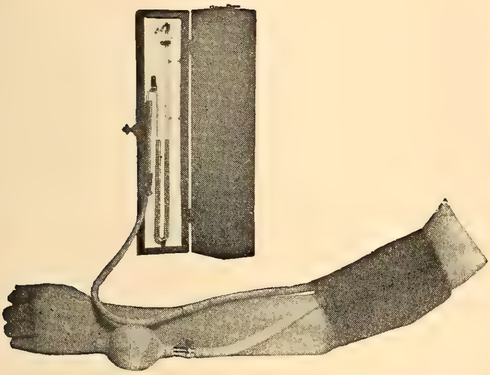
10835

10835 Saccharimeter—Epstein's. Especially desirable for clinical work on children, as well as adults, since only a small quantity of blood is required for the determination and the operation is completed in from seven to ten minutes; colorimeter readings are easily made and yield reliable results; consists of standard color tubes A and B, accurately graduated tube for the unknown, with suitable frame stand, with opaque glass slide, for the color tubes, one graduated pipette—1 cc in 1/10, one pipette graduated at two marks—1/10 and 2/10 cc, one tube graduated at 1 cc and 2.5 cc, two boiling tubes with suitable holder, filtering funnel, dropper and set of three solutions—picric acid, sodium carbonate and sodium fluoride; standard color tubes A and B and graduated tube are calibrated with the aid of certified micro-measuring apparatus, reducing the percentage of error to a minimum; complete in case (solutions separate) ---------------Each 11.00

Separate Parts:

Standard Color Tubes A and B	Each	1.25
Graduated Tube, accurately calibrated	Each	1.50
Boiling Tubes	Each	.15
Tube graduated at two marks, 1 cc and 2.5 cc	Each	.60
Pipette with two marks, at 1/10 and 2/10 cc, with rubber tube and mouthpiece	Each	1.00
Mohr's Pipette graduated in 1 cc in 1/10, graduated to tip	Each	.50
Small Funnel	Each	.25
Dropper with rubber bulb	Each	.10
4 oz. Solution Picric Acid, saturated, in glass-stoppered reagent bottle	Each	1.00
4 oz. Solution Sodium Carbonate, 10%, in glass-stoppered reagent bottle	Each	.50
1 oz. Solution Sodium Fluoride, 2%, in glass-stoppered dropping bottle	Each	.50
Hard Rubber Stand	Each	2.00
Case	Each	2.50

Apparatus for the determination of Hydrogen Ion Concentration of blood listed on page 220.



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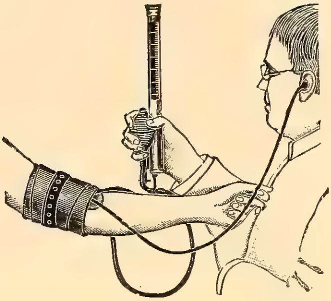

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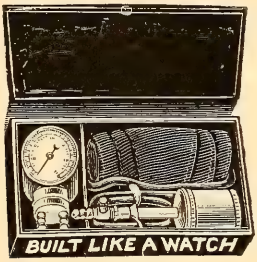
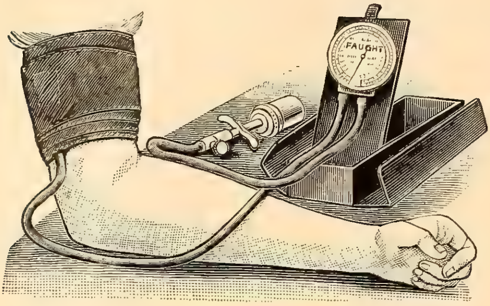


10850

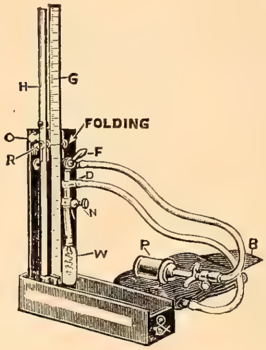
10840 **Sphygmomanometer—Beachler's Mercurial.** Standard mercurial instrument, accurate and always ready for use; is extremely simple, with no complicated parts to get out of order, and of an accuracy assured by the filtration, through an original method, of all air coming in contact with the mercury; of a convenient size, the outside dimensions being 12½ x 2¾ x 2¾ in.; equipped with standard 5 x 10-in. bag, sleeve, bulb and release valve; this instrument is equally satisfactory in determining systolic, diastolic and pulse pressure, is in use by many physicians, schools and hospitals throughout the country and is guaranteed by its manufacturers; furnished in neatly finished, mahogany case --Each 20.00

10845 **Sphygmomanometer—Mercer's.** Has all the conveniences of the spring instruments, with the accuracy of the mercury type; requires no setting up before using and has no complicated parts to get out of order; is portable, as convenient as a stethoscope and requires no more care; top of each ascending limb of the manometer is closed with special packing, which lets the air through freely but holds the mercury; mercury cannot be lost when instrument is inverted, nor can it be shot from top of tube by sudden, forcible inflation; manometer tube is so incased as to be practically unbreakable; a screw clamp is used, instead of a heavy base or box, to hold it when in use, giving better stability and making it lighter to carry; armlet is of broad type, giving correct readings on fleshy arms; a sliding scale allows instant adjustment to correct zero, sometimes necessary from changes in volume of the mercury due to differing temperatures or other causes; instrument is easily cleaned and sanitary. Supplied in flexible, leather pouch. Complete with improved arm band, stethoscope and 80-page, clothbound book on Blood Pressure --------------Each 15.00

10850 **Sphygmomanometer—Faught's Pocket-Size.** Built on the aneroid plan; is calibrated with a standard mercury sphygmomanometer and therefore, reads directly in mm Hg. from 0 to 300; furnished in genuine leather pocket case, with signed certificate by Dr. Faught and copy of Blood Pressure Primer ----------------------------Each 22.50



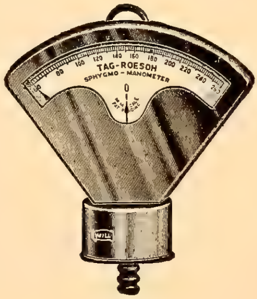
10855



10860

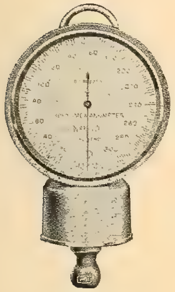
10855 **Sphygmomanometer—Faught's Clinical.** Pocket size; similar in mechanism to No. 10855, but with much larger dial and more easily read at a distance, making it especially valuable for clinical purposes; graduated to read directly in mm of Hg. from 0 to 350; unusual in that it gives readings above 300 mm Hg., a condition which may be required in studying cases of Bright's disease, eclampsia and cerebral compression; furnished in genuine leather pocket case, with signed certificate by Dr. Faught and copy of Blood Pressure Primer___Each **27.50**

10860 **Sphygmomanometer—Faught's Pocket Mercurial.** A recent design in folding mercury apparatus; constructed upon the cistern, vertical tube type and in such a manner that the manometer tube hinges in the center, which, when folded, carries with it a black and white scale; is contained in a polished, mahogany box, measuring 6¾ x ⅜ x 1⅝ in.; specially devised hinge prevents loss of mercury when instrument is in folded position; scale reads 0 to 270 mm Hg.; furnished in genuine leather pocket case, with signed certificate by Dr. Faught and copy of Blood Pressure Primer______________Each **20.00**



10865

10865 **Sphygmomanometer—Roesch's.** Featured by its accuracy, sensitiveness, portability and simplicity; consists of a gauge, an arm-sleeve, an inflating-bulb and a valve; gauge measures pressures from 0 to 260 mm of mercury, with dial graduated to centimeters and fifths of centimeters; newly devised control feature prevents instrument from being pumped beyond its maximum indication; arm-sleeve is of durable material, fastening to arm like a roller bandage; pressure bag is made of most elastic and durable rubber and, when worn, may be readily removed for repairs or replacement; improved type of valve, interposed between inflating-bulb and arm-sleeve, is so well adjusted that a slight leak can be obtained by a one-eighth turn of the large set-screw, a one-half turn releasing the pressure almost instantaneously; all springs and gears are eliminated, so that readings must remain constant, and sticking and lost motion are entirely obviated; furnished in compact, leather pocket case, measuring 2½ in. wide x 4½ in. high x 6½ in. long__________________________Each **25.00**



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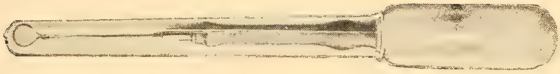
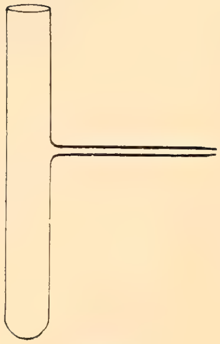


10895

10900

10870	**Sphygmomanometer—Rogers'.** Of unequalled accuracy, self-verifying; has non-adjustable dial, which is most accurate style; has standardized and engraved scale, full jewelled movement and arrangement which prevents over-inflation; is easy to read, unaffected by temperature and simple to operate; of durable construction, and so compact that it may be attached to patient's arm while making an examination___Each	25.00
10875	**Sphygmomanometer—Sanborn's Aneroid.** Adopted by the Medical Department of the U. S. Navy and featured by its realibility, coupled with compactness, light weight and economy; designed by Professor Frank B. Sanborn, of Tufts College, who personally supervises the design and construction of every part; gauge of superior workmanship, manufactured by the Waltham Watch Company; furnished complete, as illustrated, in pig-skin case ________________________Each	17.50
10880	**Blood Lancet—Moore's.** For puncturing skin to obtain drop of blood; depth of puncture may be regulated, and locking device prevents injury to person while carrying instrument in pocket__________Each	2.00
10885	**Blood Lancet.** With nickle-plated metal handle into which lancet can be screwed for pocket use ____________________________________Each	2.00
10895	**Vacuum Bleeding Tube—Keidel's.** A most satisfactory and convenient means of collecting blood specimens, perfected and first used by Dr. Albert Keidel, of Baltimore; protected needle makes possible collection of the specimen without contamination and permits its transportation under best conditions; the vacuum is easily utilized by breaking capillary portion of the bulb extending into the rubber tubing ___________________________________Each, $ .20. Per dozen	2.00
10900	**Blood Culture Vacuum Tube.** An enlarged Keidel tube containing sterile glucose bouillon, in which there is sufficient sodium citrate to prevent coagulation of the blood; also supplied with ox-bile, glycerin and peptone medium for collecting the blood of typhoid suspects __________________________________Each, $ .50. Per dozen	5.50



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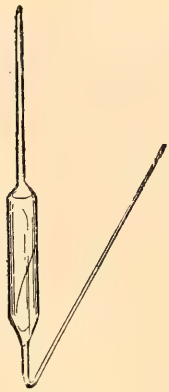
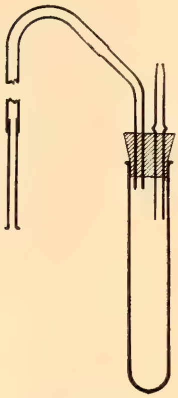


10910



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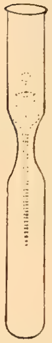

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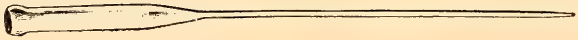


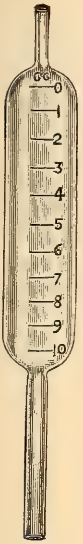
10911

10903	**Blood Taking Tube.** Designed by Dr. Clyde Cummer of Cleveland. Sample may be taken by using suction from mouth applied through tube at left. Right hand tube is ground to take Luer needle____Each Per dozen	.75 7.50
10905	**Blood Taking Tube—Taylor's.** Most convenient form of blood taking tube yet devised for hospital use; consists of test tube, 150 mm long and 18 mm in diameter, 60 mm from top of which is attached a medium-sized capillary tube, 75 mm long; end of this capillary tube is ground to fit a luer needle, which may be of any gauge, the one most commonly used being No. 18; in use a rubber cork is inserted in the mouth of the Taylor tube, with a central opening through which a glass tube, bent at right angles, is inserted, having attached to it a rubber tube, 300 mm long, with a glass mouthpiece for suction purposes ____Each	.60
10910	**Blood Capsules—Wright's.** For collecting small amounts of blood, which may then be sealed until required for use____Each $ .05. Per dozen	.30
10911	**Pipette—Wright's Blood.** Of soft glass with belled end to take rubber tube and point drawn to fine capillary; length, 7½-8"__________Each	.25
10912	**Pipette—Wright's.** With loop, for measuring the bactericidal power of blood ____Each	.60
10915	**Serum Needle Tube.** Consists of glass test tube containing a constriction in the middle, on which rests the needles for use with blood taking tube No. 10905 above ________________________________Each	.15

BIOLOID

BIOLOID BLOOD REAGENTS

Reagents and Standards after methods of Van Slyke, Folin, Wu, and other workers are available. The Standards are exact and Reagents are free from traces of any interfering impurity.



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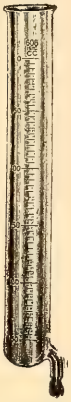

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10955

10920 **Sugar Tube—O'Grady.** Designed by Dr. George W. O'Grady of Rochester, N. Y. For blood analysis; consists of test tube, 150 mm long and 22 mm in diameter; 30 mm from the top the tube is drawn to a neck, 15 mm in diameter, and is provided with a lip; accurately graduated from 4 cc to 20 cc in 1 cc graduations ______________Each .60

10925 **Sugar Tube.** For blood sugar analysis; consists of test tube, 200 mm long and 12 mm in diameter with accurate graduations, 3, 4, 5, 7, 10, 10.5 and 15 cc ____Each .50

10930 **Salvarsan Tubes.** Graduated; length, 300 mm; diameter, 40 mm; provided with tubing connection at bottom.

No.	A	B
Capacity, cc	250	300
Each	1.50	1.50

10935 **Salvarsan Tubes.** Plain; length, 300 mm; diameter, 40 mm; provided with tubing connection at bottom.

No.	A	B
Capacity, cc	250	300
Each	.90	.90

10940 **Salvarsan Tubes.** Graduated; length, 300 mm; diameter, 40 mm; provided with tubing connection at side of tube.

No.	A	B
Capacity, cc	250	300
Each	1.50	1.50

10945 **Salvarsan Tubes.** Plain; length, 300 mm; diameter, 40 mm; provided with tubing connection at side of tube.

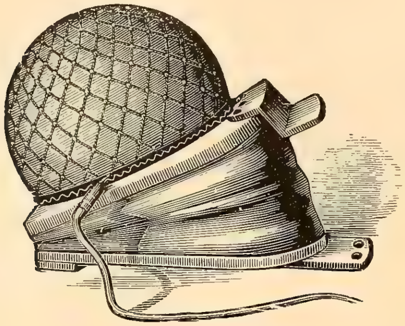
No.	A	B
Capacity, cc	250	300
Each	.90	.90

10950 **Blood Tubes—Wasserman.** Graduated and numbered every cc.

No.	A	B	C	D
Capacity, cc	5	10	15	30
Each	.24	.27	.33	.42
Per dozen	2.40	2.70	3.35	4.25

10955 **Blood Tubes—Wasserman.** Plain.

No.	A	B	C	D
Capacity, cc	5	10	15	30
Each	.11	.12	.14	.18
Per dozen	1.10	1.20	1.45	1.80



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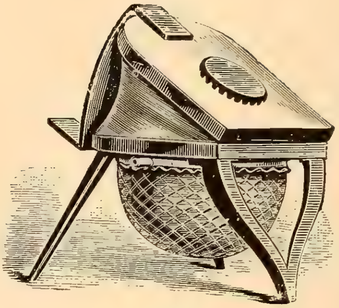

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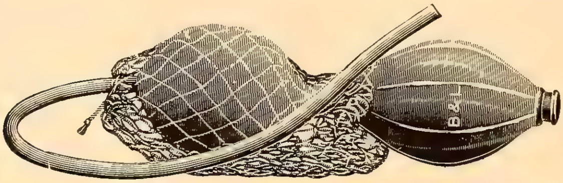


10980

10960 **Blowers—Fletcher's Foot Power.** Produce a powerful, continuous blast, the pressure of which may be increased by adding one or more rubber discs to the air reservoir.

No.	A	B	C
Diameter of air reservoir, mm	180	225	275
Each	**7.00**	**9.25**	**14.50**

10965 **Blowers—Fletcher's Foot Power.** Similar to No. 10960 above, but mounted on legs, as illustrated.

No.	A	B	C
Diameter of air reservoir, mm	180	225	275
Each	**8.00**	**10.50**	**16.00**

10970 **Blowers—Fletcher's Foot Power.** Extra rubber discs only.

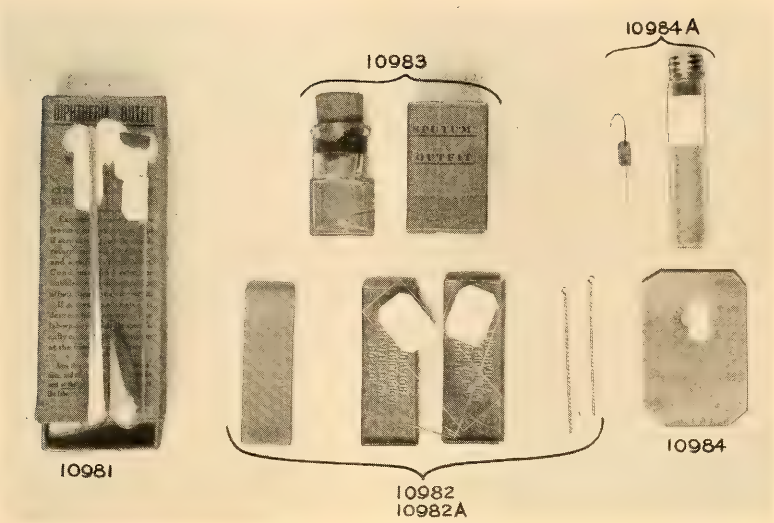
No.	A	B	C
Diameter, mm	180	225	275
Each	**.75**	**1.15**	**1.65**

10975 **Blowers—Fletcher's Foot Power.** Extra nets only.

Size No.	A	B	C
Each	**.40**	**.50**	**.60**

10980 **Blowers—Hand.** For use with blowpipes and wherever a continuous air blast is required ---Each **1.80**

For Power Blowers see No. 16560.



Board of Health Sample Outfits. These outfits are complete in themselves and provide a safe and convenient method, capable of thorough systemising, for the collection and transportation of blood, sputum or pus from the office of the physician or the home of the suspect to the laboratory. They are similar to those used by the Board of Health of Boston and other large cities. Each outfit includes complete directions for taking sample and blank covering all necessary information on patients' history.

10981 **Diphtheria Outfit.** Consists of a sterile Loeffler's blood slant, a sterile tube with cotton swabs, a history blank, and complete directions in carboard case --Prices on application

10982 **Malaria Outfit.** Consists of two labeled glass slides in tin box securely fastened and protected by a heavy rubber band, in manila envelope with directions and history blank ----------------------Prices on application

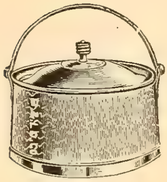
10982-A **Ophthalmic or Gonorrhea Outfit.** Similar to Malaria outfit above, but contains two sterile wire loops for making smear and a different history sheet --Prices on application

10983 **Tuberculosis Sputum Outfit.** Consists of a square sputum bottle containing some five per cent carbolic acid with directions and history blank --Prices on application

10984 **Typhoid Outfit.** Consists of an aluminum slide with a depression for the blood sample to be used for a Widal test, with instructions and history blank --Prices on application

10984-A **Wasserman Outfit.** Consists of a sterile screw cap bottle and sterile needle incased in a wooden box with instructions and history blank --Prices on application

Culture Media in Tubes or Vials, of any Formula, or adjusted to any particular Reaction.



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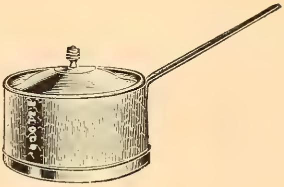

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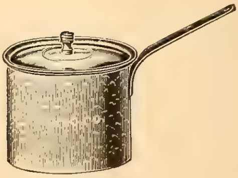


10995

10985 **Boilers—Agateware.** Of agate nickel steel, seamless; with retinned cover and patent bottom which prevents scorching of contents and renders vessel more durable; with bale handle.

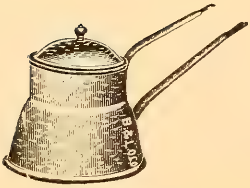
No.	A	B	C	D
Capacity (approx.), liters	1	2	3	5
Height, mm	95	100	110	125
Diameter, mm	145	170	200	225
Each	.85	.95	1.10	1.40

10990 **Boilers—Agateware.** Same as No. 10985 above, but with side handle.

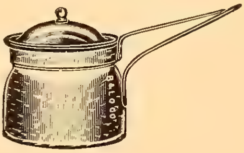
No.	A	B	C	D
Capacity (approx.), liters	1	2	3	5
Height, mm	95	100	110	125
Diameter, mm	145	170	200	225
Each	.85	.95	1.10	1.40

10995 **Boilers—Agateware.** Of agate nickel steel, seamless; deep, with retinned cover.

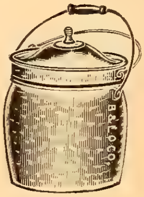
No.	A	B	C	D
Capacity (approx.), liters	1	2	4	6
Height, mm	95	115	150	160
Diameter, mm	125	140	175	215
Each	.85	.95	1.35	1.60



11000



11005



11010

11000 **Boilers—Agateware, Double.** Of agate nickel steel; with retinned cover.

No.	A	B
Capacity of inside boiler (approx.), liters	1½	4
Each	1.80	3.00

11005 **Boilers—Agateware, Double.** Of agate nickel steel, seamless; with retinned cover which fits both vessels.

No.	A	B
Capacity of inside boiler (approx.), liters	2	4
Each	2.00	3.00

11010 **Boilers—Agateware, Double, Extra Large.** Of agate nickel steel, seamless; with retinned cover which fits both vessels.

No.	A	B	C
Capacity of inside boiler (approx.), liters	6	9	14
Each	3.25	4.00	5.00

1310

1335

1350

1310 Bottles—Narrow Mouth. Of best American flint glass; for cork stoppers.

No.	A	B	C	D	E	F
Capacity, oz.	½	1	2	3	4	6
For Cork No.	2	2	3	3	4	4
No. in original case	864	864	720	576	432	360
Per Dozen	.50	.52	.58	.72	.80	.92
Per Gross in orig. case	4.90	5.25	5.80	7.20	8.50	9.20

No.	G	H	I	J	K	L
Capacity, oz.	8	12	16	20	24	32
For cork No.	5	5	6	6	7	7
No. in original case	288	216	144	120	120	96
Per Dozen	1.05	1.35	1.50	1.85	1.95	2.30
Per Gross in orig. case	10.50	13.50	15.20	18.50	19.50	23.00

1315 Bottles—Narrow Mouth. Of best American green glass; for cork stoppers.

No.	A	B	C	D	E	F	G
Capacity	8 oz.	16 oz.	32	48	64 oz.	1 gal.	2 gal.
For cork No.	5	6	8	9	10	11	14
No. in orig. case	216	144	96	48	48	36	12
Per Dozen	1.25	1.60	2.35	3.05	4.60	6.60	14.50

1320 Bottles—Narrow Mouth. Of best American amber glass; for cork stoppers.

No.	A	B	C	D	E	F	G	H	I
Capacity, oz.	1	2	4	6	8	16	24	32	48
For cork No.	2	3	4	4	5	6	8	7	8
No. in orig. case	864	720	432	360	288	144	120	96	48
Per Dozen	.42	.48	.65	.75	.85	1.25	1.70	1.85	2.35
Per Gross in orig. case	4.35	4.80	6.75	7.65	8.70	12.75	17.40	19.00	23.70

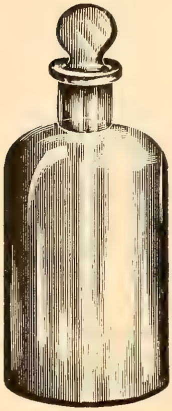
1335 Bottles—Wide Mouth. Of best American flint glass; for cork stoppers.

No.	A	B	C	D	E
Capacity, oz.	½	1	2	3	4
For cork No.	8	9	10	15	15
No. in orig. case	864	864	720	576	432
Per Dozen	.55	.60	.65	.80	.90
Per Gross in orig. case	5.50	5.90	6.50	7.90	9.10

No.	F	G	H	I	J	K
Capacity, oz.	6	8	12	16	24	32
For cork No.	16	17	17	24	22	2¼ in.
No. in orig. case	360	288	216	144	120	96
Per Dozen	1.00	1.15	1.50	1.70	2.35	2.55
Per Gross in orig.case	10.30	11.75	15.40	17.20	23.50	25.75

1350 Bottles—Extra Wide Mouth. Of flint glass; for cork stoppers.

No.	A	B	C	D	E
Capacity, oz.	½	1	2	3	4
For cork No.	7	9	12	15	16
No. in orig. case	864	864	432	288	288
Per Dozen	.50	.60	.70	.75	.85
Per Gross in orig. case	5.50	6.25	7.40	8.20	9.00



1370

1355

1360

1375

1355 **Bottles—Extra Wide Mouth.** Of best American flint glass, with narrow shoulder; for cork stoppers.

No.	A	B	C	D
Capacity, oz.	2	3	4	6
For cork No.	10	14	22	18
Per Dozen	.60	.70	.80	.90

1360 **Bottles—Extra Wide Mouth.** Of best white glass; designed to meet the need of a more satisfactory bottle for specimens in pathological and histological laboratories, etc., and superior in both shape and finish to the preceding wide mouth bottles; for cork stoppers.

No.	A	B	C
Capacity, oz.	1	2	4
No. in orig. case	864	432	288
Per Dozen	.50	.60	.70
Per Gross	5.00	6.00	7.00

1370 **Bottles—Narrow Mouth.** Of flint glass; with flat, vertical glass stopper.

No.	A	B	C	D	E	F
Capacity, oz.	½	1	2	3	4	6
No. in orig. case	864	720	720	576	432	360
Per Dozen	1.25	1.30	1.60	1.70	1.80	2.00
Per Gross in orig. case	12.50	13.00	16.00	17.00	18.00	20.00

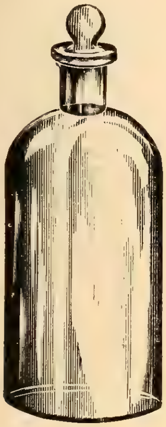
No.	G	H	I	J	K
Capacity, oz.	8	12	16	32	64
No. in orig. case	288	144	144	72	48
Per Dozen	2.20	2.70	3.40	4.80	8.00
Per Gross in orig. case	22.00	27.00	34.00	48.75	80.00

1375 **Bottles—Narrow Mouth.** Of amber glass; with flat, vertical glass stopper.

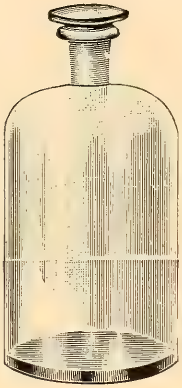
No.	A	B	C	D	E	F	G
Capacity, oz.	1	2	4	8	16	32	64
No. in orig. case	720	720	432	288	144	72	48
Per Dozen	1.30	1.40	1.80	2.30	2.80	3.80	6.00
Per Gross in orig. case	15.00	16.20	19.60	29.00	40.00	46.50	

1380 **Bottles—Narrow Mouth.** Of especially clear amber glass; with flat, vertical glass stopper, very carefully ground.

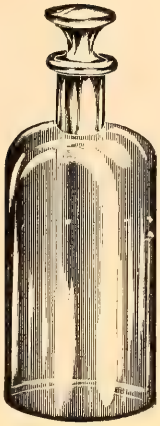
No.	A	B	C	D	E	F
Capacity, oz.	1	2	4	8	16	32
No. in orig. case	864	720	432	288	144	72
Per Dozen	1.60	1.65	2.00	2.80	3.50	4.80



1385



1390



1395

1385 **Bottles—Narrow Mouth.** Of green glass; with flat, vertical glass stopper; especially intended for acids.

No.	A	B	C	D	E	F
Capacity,	8 oz.	16 oz.	32 oz.	64 oz.	1 gal.	2 gal.
No. in orig. case	144	144	96	48	36	12
Per Dozen	2.40	3.00	4.20	7.00	9.60	21.00

1390 **Bottles—Narrow Mouth.** Of flint glass; with flat glass stopper; turned in a wet, wooden mould, which imparts a high lustre to the outside surface; particularly recommended for use as laboratory reagent bottles.

No.	A	B	C	D	E	F
Capacity, oz.	1	2	4	8	16	32
No. in orig. case	864	720	432	288	144	72
Per Dozen	1.50	1.60	1.90	2.80	3.80	4.50
Per Gross in orig. case	15.00	16.20	19.60	29.00	40.00	46.50

1395 **Bottles—Narrow Mouth.** Of flint glass; with high-ground, mushroom, glass stopper; has a fine, fire-polished finish, approaching shop furniture ware in appearance and much superior to iron mould finish; recommended especially for laboratory or other uses where a bottle of better appearance is desired.

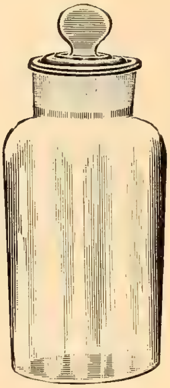
No.	A	B	C	D	E	F
Capacity, oz.	½	1	2	3	4	6
No. in orig. case	864	720	720	576	432	360
Per Dozen	1.25	1.40	1.50	1.65	1.80	2.20
Per Gross in orig. case	12.85	14.25	15.85	17.10	18.85	22.80

No.	G	H	I	J	K
Capacity, oz.	8	12	16	32	64
No. in orig. case	288	144	144	96	12
Per Dozen	2.40	2.80	3.20	4.50	7.50
Per Gross in orig. case	24.75	29.75	34.20	47.70	78.40

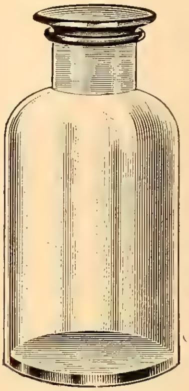
No.	L	M	N
Capacity, gal.	1	2	3
No. in orig. case	12	6	3
Per Dozen	14.50	31.00	49.00

1400

1405



1410



1415

1400 **Bottles—Wide Mouth.** Of flint glass; with flat, vertical glass stopper.

No.	A	B	C	D	E
Capacity, oz.	½	1	2	3	4
No. in orig. case	864	720	720	576	432
Per Dozen	**1.40**	**1.50**	**1.60**	**1.80**	**2.00**
Per Gross in orig. case	**14.00**	**15.00**	**16.00**	**18.00**	**21.00**

No.	F	G	H	I	J
Capacity, oz.	6	8	12	16	32
No. in orig. case	360	288	144	144	72
Per Dozen	**2.20**	**2.40**	**3.00**	**3.20**	**4.20**
Per Gross in orig. case	**22.50**	**24.00**	**31.00**	**32.50**	**44.00**

1405 **Bottles—Wide Mouth.** Of amber glass; with flat, vertical glass stopper.

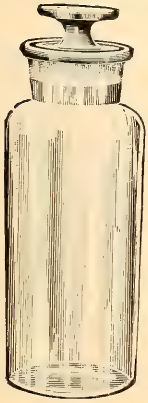
No.	A	B	C	D	E	F
Capacity, oz.	1	2	4	8	16	32
No. in orig. case	720	720	432	288	144	72
Per Dozen	**1.30**	**1.40**	**1.80**	**2.10**	**2.80**	**3.80**
Per Gross in orig. case	**13.50**	**14.40**	**19.00**	**21.60**	**29.00**	**39.60**

1410 **Bottles—Wide Mouth.** Of especially clear, amber glass; with flat, vertical stopper, very carefully ground.

No.	A	B	C	D	E	F
Capacity, oz.	1	2	4	8	16	32
No. in orig. case	864	720	432	288	144	72
Per Dozen	**1.70**	**1.90**	**2.80**	**3.20**	**3.80**	**5.20**

1415 **Bottles—Wide Mouth.** Of flint glass; with flat glass stopper of same quality as No. 1410 above.

No.	A	B	C	D	E	F
Capacity, oz.	1	2	4	8	16	32
No. in orig. case	864	720	432	288	144	72
Per Dozen	**1.70**	**1.90**	**2.80**	**3.20**	**3.80**	**5.20**
Per Gross in orig. case	**17.50**	**19.20**	**28.00**	**32.00**	**39.00**	**55.00**



1420

1435

1420 **Bottles—Wide Mouth.** Of flint glass; with high, ground-glass stopper; of same quality as No. 1415 above.

No.	A	B	C	D	E	F
Capacity, oz.	½	1	2	3	4	6
No. in orig. case	864	720	720	576	432	360
Per Dozen	1.35	1.40	1.50	1.60	1.80	2.10
Per Gross in orig. case	13.50	14.70	16.05	17.10	19.25	22.00

No.	G	H	I	J	K
Capacity, oz.	8	12	16	32	64
No. in orig. case	288	144	144	72	48
Per Dozen	2.20	2.70	3.00	4.40	7.80
Per Gross in orig. case	23.50	28.90	31.70	45.70	80.00

	L	M	N
Capacity, gal.	1	2	3
No. in orig. case	12	6	4
Per Dozen	18.50	25.00	67.50

1425 **Bottles—Extra Wide Mouth.** Of flint glass; with flat glass stopper.

No.	A	B	C	D
Capacity, oz.	2	3	4	6
Per Dozen	1.80	2.00	2.40	2.60
Per Gross	17.80	22.50	23.80	27.00

Bottles—Reagent. The reagent bottles offered below have ground glass labels, blown in the glass, the surface of each letter being so ground as to render it distinct. The lettering is thus indestructible and in no danger of being defaced when the bottle is washed or handled, and the inconvenience and unsightly appearance attending the use of paper labels is entirely avoided. These bottles are made of glass containing no lead, zinc or other metallic flux and are unequalled as regards their convenient shape, thin, dropping lip and perfect stoppering. They are exclusively used in many of the leading laboratories of the United States.

1430 **Bottles—Reagent.** Narrow mouth capacity 1 oz.; height, 3⅝ in.,

Per Dozen 1.75
Per Gross 17.00

Label No.		Label No.	
326	Cobaltous Nitrate ------- $Co(NO_3)_2$	325	Silver Nitrate (Amber) ----- $AgNO_3$
336	Gold Chloride --------------- $AuCl_3$	341	Blank
327	Platinic Chloride ------------- $PtCl_4$		

1435 Bottles—Reagent. Narrow mouth; capacity, 4 oz.; height, 5¼ in.

Per Dozen	2.40
Per Gross	25.00

Item No.		
3	Acetic Acid	$HC_2H_3O_2$
30	Alcohol	C_2H_5OH
18	Ammonium Carbonate	$(NH_4)_2CO_3$
17	Ammonium Chloride	NH_4Cl
15	Ammonium Hydroxide	NH_4OH
82	Ammonium Molybdate	$(NH_4)_6Mo_7O_{24}$
19	Ammonium Oxalate	$(NH_4)_2C_2O_4$
16	Ammonium Sulphide (Amber)	$(NH_4)_2S$
31	Ammonium Sulphocyanide	NH_4CNS
97	Ammonium Sulphydrate	NH_4HS
33	Barium Carbonate	$BaCO_3$
20	Barium Chloride	$BaCl_2$
32	Barium Hydroxide	$Ba(OH)_2$
401	Barium Nitrate	$Ba(NO_3)_2$
426	Bromine for Hypobromite.	
406	Bromine Water	
21	Calcium Chloride	$CaCl_2$
23	Calcium Hydroxide	$Ca(OH)_2$
22	Calcium Sulphate	$CaSO_4$
83	Carbon Disulphide	CS_2
407	Chloroform	$CHCl_3$
408	Cochineal	
409	Coralline	
36	Cupric Sulphate	$CuSO_4$
421	Dimethyl Glyoxime	$(CH_3)_2C_2(NOH)_2$
35	Ether	$(C_2H_5)_2O$
58	Fehling's Solution	
29	Ferric Chloride	Fe_2Cl_6
28	Ferrous Sulphate	$FeSO_4$
2	Hydrochloric Acid	HCl
419	Hydrochloric Acid, Con.	HCl
429	Hydrochloric Acid, Dil.	HCl
428	Hydrogen Peroxide	H_2O_2
1	Hydrogen Sulphide (Amber)	H_2S
87	Indigo Solution	
414	Iodine Solution	$I+KI$
27	Lead Acetate	$Pb(C_2H_3O_2)_2$
410	Litmus	
90	Magnesia Mixture	
24	Magnesium Sulphate	$MgSO_4$
25	Mercuric Chloride	$HgCl_2$
100	Mercuric Potassium Iodide	
86	Mercurous Nitrate	$HgNO_3$
415	Methyl Alcohol	CH_3OH
411	Methyl Orange	
88	Nessler's Solution	
5	Nitric Acid	HNO_3
422	Nitric Acid, Con.	HNO_3
430	Nitric Acide, Dil.	HNO_3
425	Obermayer's Reagent	
93	Oxalic Acid	$H_2C_2O_4$
423	Phenol	C_6H_5OH
412	Phenolphthalein	
94	Picric Acid	$HC_6H_2(NO_2)_3O$
37	Platinic Chloride	$PtCl_4$
8	Potassium Carbonate	K_2CO_3
96	Potassium Chromate	K_2CrO_4
13	Potassium Dichromate	$K_2Cr_2O_7$
11	Potassium Ferricyanide	$K_3Fe(CN)_6$
6	Potassium Ferrocyanide	$K_4Fe(CN)_6$
12	Potassium Hydroxide	KOH
10	Potassium Iodide	KI
9	Potassium Sulphate	K_2SO_4
7	Potassium Sulphocyanide	$KCNS$
26	Silver Nitrate (Amber)	$AgNO_3$
404	Silver Sulphate	Ag_2SO_4
60	Sodium Acetate	$NaC_2H_3O_2$
59	Sodium Carbonate	Na_2CO_3
416	Sodium Cobaltic Nitrate	
61	Sodium Hydroxide	$NaOH$
427	Sodium Hydroxide for Hypobromite	$NaOH$
14	Sodium Phosphate	Na_2HPO_4
417	Sodium Thiosulphate	$Na_2S_2O_3$
81	Stannous Chloride	$SnCl_2$
4	Sulphuric Acid	H_2SO_4
420	Sulphuric Acid, Con.	H_2SO_4
431	Sulphuric Acid, Dil.	H_2SO_4
424	Tinct. Guaiac	
413	Tumeric	
38	Blank	

These lists are representative only. Space prevents the listing of all. When ordering, do not be restricted in your selection to this list. We furnish any label.

1440 **Bottles—Reagent.** Narrow mouth; capacity, 8 oz.; height, 6½ in.

Per Dozen 3.00
Per Gross 32.00

Item No.		
131	Acetic Acid	$HC_2H_3O_2$
126	Alcohol	C_2H_5OH
110	Ammonium Carbonate	$(NH_4)_2CO_3$
109	Ammonium Chloride	NH_4Cl
108	Ammonium Hydroxide	NH_4OH
155	Ammonium Molybdate	$(NH_4)_6Mo_7O_{24}$
130	Ammonium Oxalate	$(NH_4)_2C_2O_4$
158	Ammonium Phosphate	$(NH_4)_2HPO_4$
122	Ammonium Sulphide (Amber)	$(NH_4)_2S$
114	Barium Chloride	$BaCl_2$
151	Calcium Hydroxide	$Ca(OH)_2$
159	Ether	$(C_2H_5)_2O$
154	Ferrous Sulphate	$FeSO_4$
105	Hydrochloric Acid, Con.	HCl
106	Hydrochloric Acid, Dil.	HCl

Item No.		
107	Hydrogen Sulphide (Amber)	H_2S
152	Lead Acetate	$Pb(C_2H_3O_2)_2$
153	Mercuric Chloride	$HgCl_2$
103	Nitric Acid, Con.	HNO_3
104	Nitric Acid, Dil.	HNO_3
171	Potassium Carbonate	K_2CO_3
160	Potassium Chromate	K_2CrO_4
172	Pottassium Ferricyanide	$K_3Fe(CN)_6$
173	Potassium Ferrocyanide	$K_4Fe(CN)_6$
150	Potassium Hydroxide	KOH
145	Silver Nitrate (Amber)	$AgNO_3$
112	Sodium Carbonate	Na_2CO_3
111	Sodium Hydroxide	$NaOH$
129	Sodium Phosphate	Na_2HPO_4
156	Stannous Chloride	$SnCl_2$
101	Sulphuric Acid, Con.	H_2SO_4
102	Sulphuric Acid, Dil.	H_2SO_4
116	Blank	

1445 **Bottles—Reagent.** Narrow mouth; capacity, 16 oz.; height, 7¾ in.

Per Dozen 4.20
Per Gross 46.00

Item No.		
237	Acetic Acid	$HC_2H_3O_2$
235	Ammonium Carbonate	$(NH_4)_2CO_3$
232	Ammonium Chloride	NH_4Cl
204	Ammonium Hydroxide	NH_4OH
227	Ammonium Hydroxide, Dil.	NH_4OH+Aq
229	Ammonium Sulphide, Dil.	$(NH_4)_2S+Aq$
236	Ammonium Sulphide (Amber)	$(NH_4)_2S$
218	Barium Chloride	$BaCl_2$
223	Calcium Hydroxide	$Ca(OH)_2$
225	Calcium Sulphate	$CaSO_4$
230	Ether	$(C_2H_5)_2O$
224	Ferrous Sulphate	$FeSO_4$
217	Hydrochloric Acid	HCl

Item No.		
222	Hydrochloric Acid, Con.	HCl
231	Hydrochloric Acid, Dil.	HCl
226	Hydrodisodic Phosphate	Na_3HPO_4
216	Nitric Acid	HNO_3
219	Nitric Acid, Con.	HNO_3
232	Nitric Acid, Dil.	HNO_3
238	Potassium Chromate	K_2CrO_4
221	Potassium Hydroxide	KOH
240	Silver Nitrate (Amber)	$AgNO_3$
233	Sodium Hydroxide	$NaOH$
215	Sulphuric Acid	H_2SO_4
220	Sulphuric Acid, Con.	H_2SO_4
211	Blank	

1450 **Bottles—Reagent.** Narrow mouth; capacity, 32 oz.; height, 9½ in.

Per Dozen 7.00
Per Gross 80.00

Item No.		
505	Hydrochloric Acid, Con.	HCl
506	Hydrochloric Acid, Dil.	HCl
503	Nitric Acid, Con.	HNO_3

Item No.		
504	Nitric Acid, Dil.	HNO_3
501	Sulphuric Acid, Con.	H_2SO_4
502	Sulphuric Acid, Dil.	H_2SO_4
511	Blank	

1455 Bottles—Reagent. Wide mouth; capacity, 1 oz.; height, 3⅛ in.

Per	Dozen	1.70
Per	Gross	18.00

Item No.		
374	Ammonium Phosphate	$(NH_4)_2HPO_4$
361	Ammonium Sodium Phosphate	$NaNH_4HPO_4$
351	Borax	$Na_2B_4O_7$
364	Copper	Cu
365	Ferrous Sulphate	$FeSO_4$
366	Ferrous Sulphide	FeS
377	Phenyl Hydrazine	C_6H_5NH,NH_2
367	Potassium Chlorate	$KClO_3$
358	Potassium Cyanide	KCN

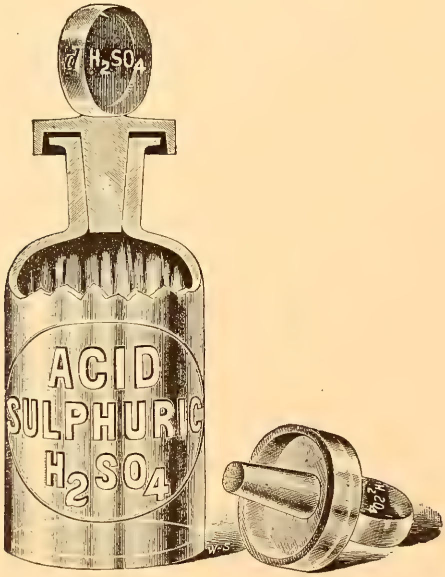
Item No.		
368	Potassium Ferricyanide	$K_3Fe(CN)_6$
354	Potassium Nitrate	KNO_3
372	Test Paper	
353	Sodium Acetate	$NaC_2H_3O_2$
369	Sodium Bitartrate	$NaHC_4H_4O_6$
350	Sodium Carbonate	Na_2CO_3
370	Sodium Nitrate	$NaNO_3$
376	Sod. Pot. Carbonate	$Na_2CO_3K_2CO_3$
371	Starch	
373	Zinc	
375	Blank	

1460 Bottles—Reagent. Wide mouth; capacity, 4 oz.; height, 4⅞ in.

Per	Dozen	3.40
Per	Gross	36.00

Item No.		
314	Ammonium Sulphate	$(NH_4)_2SO_4$
304	Borax	$Na_2B_4O_7$
305	Ferrous Sulphate	$FeSO_4$
300	Potassium Cyanide	KCN

Item No.		
302	Potassium Nitrate	KNO_3
313	Sod. Am. Hyd. Phos.	$Na(NH_4)HPO_4+4H$
301	Sodium Carbonate	Na_2CO_3
312	Test Paper	
307	Blank	



Bottles—Jewett's Reagent. The great utility of this improvement in reagent bottles will at once be recognized.

To keep the contents clear, the mouth and lip are completely protected from accumulations of dust by a hood and its pendant flange, made in one piece with the stopper.

It is a simple and effective bottle and needs but a trial to insure it a permanent place in every laboratory.

These bottles have the chemical names and equivalents in raised letters ground on the surface. They are made from glass containing no lead, zinc or metallic flux.

Any names not found on the list can be engraved on bottle at small extra charge.

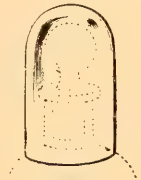
Please order by numbers.

1465 **Bottles—Reagent.** Jewett's narrow mouth; capacity, 4 oz. (125 cc); height, 4¾ in. Per Dozen 3.60

Item No.		
10	Hydrogen Sulphide (Amber)	H_2S
20	Hydrochloric Acid	HCl
30	Acetic Acid	$HC_2H_3O_2$
40	Sulphuric Acid	H_2SO_4
50	Nitric Acid	HNO_3
60	Potassium Ferrocyanide	$K_4Fe(CN)_6$
70	Potassium Sulphocyanide	$KCNS$
80	Potassium Carbonate	K_2CO_3
90	Potassium Sulphate	K_2SO_4
100	Potassium Iodide	KI
110	Potassium Ferricyanide	$K_3Fe(CN)_6$
120	Potassium Hydrate	KOH
130	Potassium Dichromate	$K_2Cr_2O_7$
140	Sodium Phosphate	Na_2HPO_4
150	Ammonium Hydroxide	NH_4OH
160	Ammonium Sulphide (Amber)	$(NH_4)_2S$
170	Ammonium Chloride	NH_4Cl
180	Ammonium Carbonate	$(NH_4)_2CO_3$
190	Ammonium Oxalate	$(NH_4)_2C_2O_4$
200	Barium Chloride	$BaCl_2$
210	Calcium Chloride	$CaCl_2$
220	Calcium Sulphate	$CaSO_4$
230	Calcium Hydrate	$Ca(OH)_2$
240	Magnesium Sulphate	$MgSO_4$
250	Mercuric Chloride	$HgCl_2$
260	Silver Nitrate (Amber)	$AgNO_3$
270	Lead Acetate	$Pb(C_2H_3O_2)_2$
280	Ferrous Sulphate	$FeSO_4$
290	Ferric Chloride	Fe_2Cl_6
300	Alcohol	C_2H_5OH
310	Ammonium Sulphocyanide	NH_4CNS
320	Barium Hydroxide	$Ba(OH)_2$
330	Barium Carbonate	$BaCO_3$
350	Ether	$(C_2H_5)_2O$
360	Cupric Sulphate	$CuSO_4$
590	Sodium Carbonate	Na_2CO_3
610	Sodium Hydroxide	$NaOH$
380	Blank	

1470 **Bottles**—Reagent. Jewett's narrow mouth; capacity, 8 oz. (250 cc); height, 7¼ in. Per Dozen 4.50

Item No.		
1010	Sulphuric Acid, Con.	H_2SO_4
1020	Sulphuric Acid, Dil.	H_2SO_4
1030	Nitric Acid, Con.	HNO_3
1040	Nitric Acid, Dil.	HNO_3
1050	Hydrochloric Acid, Con.	HCl
1060	Hydrochloric Acid, Dil.	HCl
1070	Hydrogen Sulphide (Amber)	H_2S
1080	Ammonium Hydroxide	NH_4OH
1090	Ammonium Chloride	NH_4Cl
1100	Ammonium Carbonate	$(NH_4)_2CO_3$
1110	Sodium Hydroxide	$NaOH$
1120	Sodium Carbonate	Na_2CO_3
1140	Barium Chloride	$BaCl_2$
1160	Blank	
1220	Ammonium Sulphide (Amber)	$(NH_4)_2S$
1260	Alcohol	C_2H_5OH
1290	Sodium Phosphate	Na_2HPO_4
1300	Ammonium Oxalate	$(NH_4)_2C_2O_4$
1310	Acetic Acid	$HC_2H_3O_2$
1450	Silver Nitrate (Amber)	$AgNO_3$
1500	Potassium Hydroxide	KOH
1510	Calcium Hydrate	$Ca(OH)_2$
1520	Lead Acetate	$Pb(C_2H_3O_2)_2$



1475

1475 **Bottle Caps.** Of glass; designed to fit over stoppers of reagent bottles.

No.	A	B	C	D
For bottle, capacity, oz.	4	8	16	32
Height, inside, in.	2	2⅜	2½	2⅝
Diameter, inside, in.	1¼	1⅝	1⅞	2⅛
Per Dozen	1.55	1.80	2.10	2.25

1477

1477 **Bottles—Stain Solution.** These are 30 cc patented T. K. dropping bottles with flat top ground stopper, protecting the lip of bottle from dust and with ground glass labels blown in the glass. The surface of the letters is so ground as to render them distinct. Indistructible and cannot be defaced by washing or careless handling, and eliminates the inconvenience and unsightly appearance attending the use of paper labels. Of special glass containing no metallic flux and at present made with the following labels. Other labels to be added ________________ Per dozen 4.20
Per gross 42.00

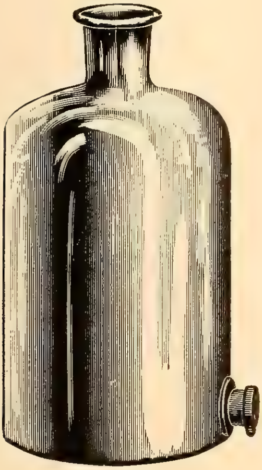
Label No.	
1	Acid Alcohol
5	Acid Fuchsin
10	Alizarin
15	Bismarck Brown
20	Carbol Fuchsin
25	Carbol Thionin
30	Carmine
35	Congo Red
40	Eosin
45	Gabbett's Stain
50	Gentian Violet
55	Giemsa's Stain
60	Gram's Stain
64	Haematoxylin
70	Jenner's Blood Stain

Label No.	
75	Litmus
80	Loeffler's Methylene Blue
85	Lugol's Solution
90	Malachite Green
95	Methyl Orange
100	Methyl Red
105	Methylene Blue
110	Orange G
115	Osmic Acid
120	Picric Acid
125	Phenolphthalein
130	Romanowsky Stain
135	Sudan III
140	Thionin Blue
145	Wright's Stain

For special blocks to hold above bottles see No. 17055, page 400.

REAGENT BLOCKS

Blocks made according to your own specifications or suggestions.



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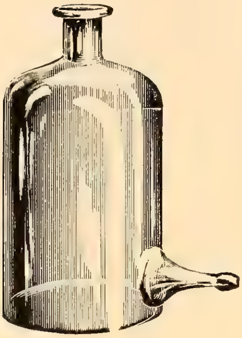


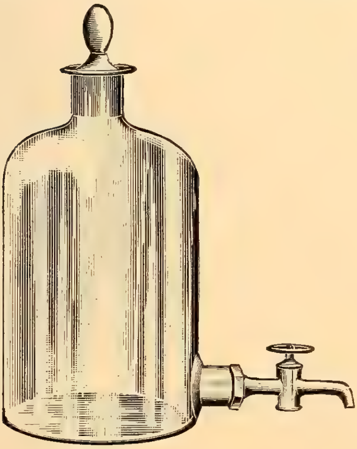
1485

1480 **Bottles—Aspirator.** Of heavy, white glass; with outlet near bottom.

No.	A	B	C	D	E
Capacity, cc	250	500	1000	2000	4000
Each	.70	1.15	1.75	2.25	3.40

1485 **Bottles—Aspirator.** Of heavy, white glass; with outlet tube near bottom, formed into nipple for attaching rubber tubing.

No.	A	B	C	D	E	F	G
Capacity, cc	125	250	500	1000	2000	4000	8000
Each	.70	.70	1.15	1.75	2.25	3.40	5.00



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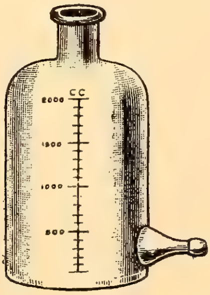


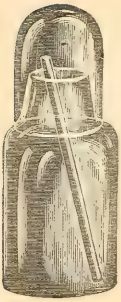
1495

1490 **Bottles—Aspirator.** With ground-glass stopper and glass stopcock ground into outlet near bottom.

No.	A	B	C	D	E
Capacity, cc	250	500	1000	2000	4000
Each	3.20	4.25	4.80	5.25	6.40

1495 **Bottles—Aspirator.** Graduated; of heavy, white glass, with neck ground inside.

No.	A	B
Capacity, cc	500	1000
Each	3.00	4.00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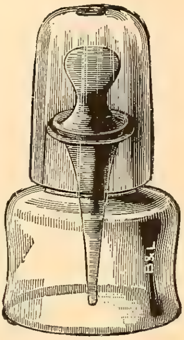
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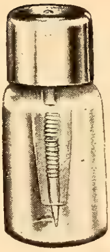
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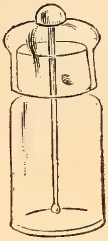
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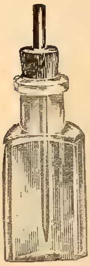

1515

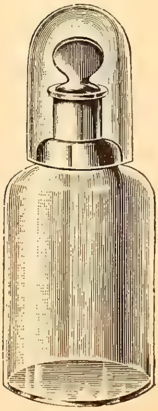
1500 **Bottles—Balsam.** Having wide mouth, with loose glass rod and glass cap; capacity, 60 cc ---------- Each .25

1505 **Bottle—Balsam.** With glass, balsam dropper fitting loosely in neck of bottle, and with glass cap ground on; capacity, 45 cc ---------- Each .35

1510 **Bottle—Cedar Oil Immersion, Bausch & Lomb.** With metal cap -- Each 1.25

1512 **Bottle—Cedar Oil Immersion.** With loose fitting, glass cap, having glass dropping rod fused to same ---------- Each .60

1515 **Bottle—Cedar Oil.** With rubber stopper and glass dropper; capacity, 30 cc ---------- Each .15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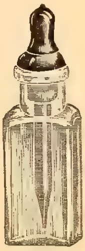
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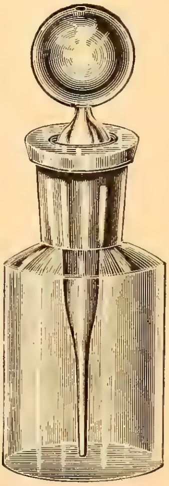

1525

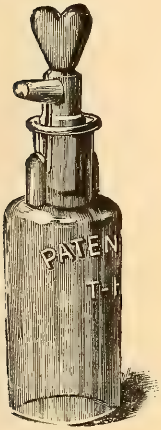
1520 **Bottles—Cobalt or Acid.** With solid glass stopper and glass cap ground on.

No.	A	B
Capacity, cc	50	100
Each	.45	.50

1525 **Bottle—Dropping.** With pipette stopper, having glass bulb with perforation by which the amount of fluid ejected can be controlled; capacity, 15 cc ---------- Each .32

1530 **Bottles—Dropping.** With pipette stopper, having rubber cap to control amount of fluid ejected.

No.	A	B
Capacity, cc	30	60
Each	.06	.09



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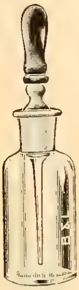

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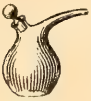

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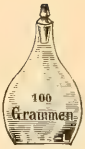

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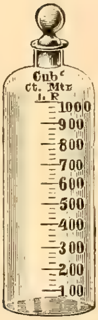

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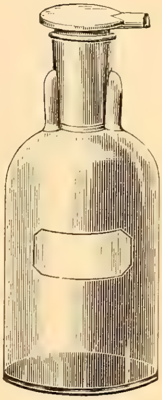


1550

1535 Bottles—Dropping. With ground-in pipette; delivery may be controlled by finger or by use of a rubber bulb.

No.	A	B	C
Capacity, cc	15	30	50
Each	.30	.33	.36

1540 Bottles—Dropping. Same as 1535 above, but provided with rubber bulb.

No.	A	B	C
Capacity, cc	15	30	50
Each	.33	.36	.39

1545 Bottles—Dropping. TK patent; with stopper arranged to deliver contents drop by drop or hermetically seal the bottle.

No.	A	B	C	D	E
Capacity, cc	15	30	50	75	100
Each	.22	.23	.25	.30	.32

1550 Bottles—Dropping. Same at No. 1545 above, but with flat stopper protecting lip of bottle from dust.

No.	A	B	C	D	E
Capacity, cc	15	30	50	100	200
Each	.22	.23	.25	.32	.38

1560 Bottle—Dropping, Shuster's. Without stopper; capacity, 30 cc___Each .40

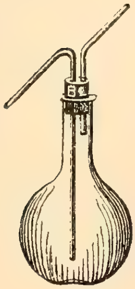
1565 Bottle—Dropping, Shuster's. With ground-glass stopper; capacity, 30 cc ____Each .60

1570 Bottles—Mixing. Of flint glass, accurately graduated; with ground-glass stopper.

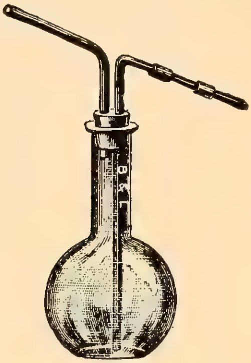
No.	A	B	C	D	E
Capacity, cc	100	250	500	1000	2000
Each	1.10	1.35	1.75	3.50	5.00

1620 Bottles—Specific Gravity, Gay-Lussac's. With perforated stopper; accurately adjusted.

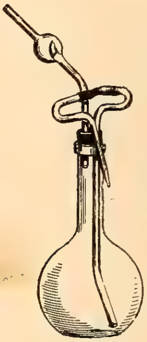
No.	A	B	C	D	E	F	G
Capacity, cc	1	2	5	10	25	50	100
Each	1.50	1.50	1.50	1.50	1.50	2.25	2.75



1695



1700



1705

1695 Bottles—Washing. With glass tubes and rubber stopper.

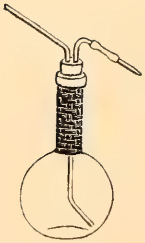
No.	A	B	C	D	E	F	G
Capacity, cc	125	250	375	500	750	1000	2000
Each	.35	.45	.50	.55	.65	.70	1.00

1700 Bottles—Washing, Faraday's. With rubber stopper and glass tubes, the outlet tube having rubber joint to give flexibility.

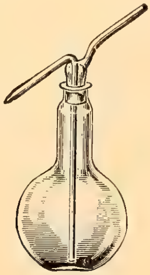
No.	A	B	C	D	E	F	G
Capacity, cc	125	250	375	500	750	1000	2000
Each	.50	.60	.65	.70	.80	.85	1.05

1705 Bottles—Washing. Provided with safety mouthpiece, rubber stopper and movable exit tube.

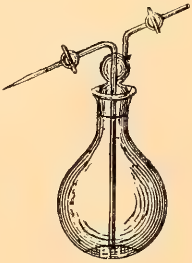
No.	A	B	C	D	E	F	G
Capacity, cc	125	250	375	500	750	1000	2000
Each	1.25	1.25	1.40	1.50	1.60	1.75	2.25



1710



1715



1720

1710 Bottles—Washing. Of Pyrex glass; stopper and tubes same as No. 1700, but neck covered with wicker for convenient use with hot fluids.

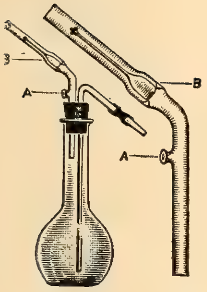
No.	A	B	C	D	E
Capacity, cc	150	250	500	700	1000
Each	.80	.90	1.00	1.15	1.25

1715 Bottles—Washing. With glass tubes and glass stopper ground in; designed for use with volatile fluids, as ether.

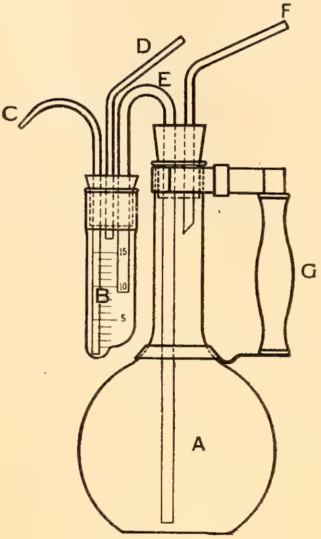
No.	A	B	C	D
Capacity, cc	125	250	500	1000
Each	1.25	1.55	2.00	2.50

1720 Bottles—Washing. With glass tubes, stopcocks and glass stopper ground in.

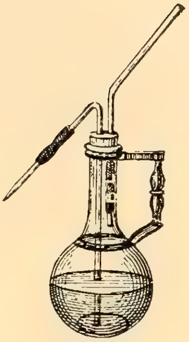
No.	A	B	C	D
Capacity, cc	125	250	500	1000
Each	2.75	3.10	3.50	4.00



1725 1730



1735



1740

1725 **Bottles—Washing, Griffin's.** With rubber stopper and flexible delivery tube; most nearly perfect washing bottle, designed to provide continuous flow by means of Griffin tube described below.

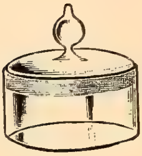
No.	A	B	C
Capacity, cc	250	500	1000
Each	1.70	1.80	2.00

1730 **Bottle—Washing—Griffin's Tube Only.** Action is simple and almost self-explanatory. When holding washing bottle, the hole "A" (see illustration) is closed by the thumb; as soon as air is blown down the inflow tube and the mouth removed, the valve "B" is blown back by the excess pressure; this pressure is now quite sufficient to force a stream of water through the jet, but the current may be stopped immediately by removing the thumb from hole "A." As the cessation of the current is practically instantaneous, the washing bottle will be of great advantage also in filling small measures, etc., to a fixed graduation; tube only ....Each 1.25

1735 **Bottle—Washing, Hartmann's.** For use in operations requiring measured quantities of washing solution; particularly valuable for the determination of total tartaric acid in wines, musts and the like, and for any washing of precipitates in chemical laboratory work; delivers measured quantities of washing solution, acts automatically, and is serviceably constructed; consists of the following parts (see illustration): A, stock bottle; B, graduated measuring chamber; C, delivery tube; D, pressure tube; E, syphon tube; F, vent tube; G, handle; measuring chamber, B, may be adjusted to deliver any amount up to 15 cc, by raising or lowering syphon tube, E..................Each 3.50

1740 **Bottles—Washing—Handles Fitted.** Any of washing bottles above will be supplied with handles, as shown in illustration, at extra cost ....Each 1.00

1745

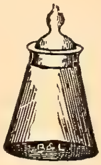


1755-60

1745

1765

1775



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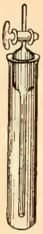

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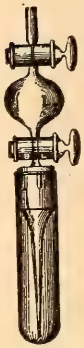


1785

1745 **Bottles—Weighing.** High form, with ground-glass stopper; flat bottom; very light.

No.	A	B	C	D	E	F	G	H
Height, mm	50	50	60	65	75	75	75	80
Diameter, mm	15	20	10	15	15	22	25	15
Each	.40	.50	.40	.45	.45	.55	.60	.45

No.	I	J	K	L	M	N	O
Height, mm	90	100	100	100	120	125	150
Diameter, mm	18	23	25	40	32	25	25
Each	.60	.80	.80	1.50	1.00	1.00	1.20

1755 **Bottles—Weighing.** Low form, with ground-glass stopper; flat bottom.

No.	A	B	C	D	E	F	G	H	I
Height, mm	40	50	50	50	60	65	70	80	100
Diameter, mm	25	25	30	40	30	45	35	45	60
Each	.50	.55	.60	.80	.70	1.10	.80	1.20	2.50

1760 **Bottles—Weighing.** Low form, with ground-glass stopper; flat bottom.

No.	A	B	C
Height, mm	30	30	30
Diameter, mm	50	60	70
Each	1.70	2.20	3.00

1765 **Bottles—Weighing.** With contracted neck and ground-in, glass stopper.

No.	A	B	C	D	E
Height, mm	35	40	50	50	50
Diameter, mm	35	25	25	30	40
Each	.70	.50	.55	.70	.80

No.	F	G	H	I	J
Height, mm	50	60	65	65	75
Diameter, mm	45	30	50	65	40
Each	1.00	.80	1.20	3.50	1.00

1770 **Bottles**—Weighing. Conical in form, with ground-glass stopper, flat bottom.

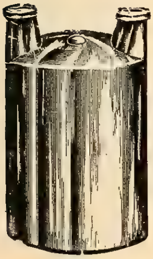
No.	A	B	C	D	E
Capacity, cc	10	15	30	60	100
Each	.60	.65	.90	1.05	1.50

1775 **Bottle—Weighing.** Consists of two cylindrical tubes, one sliding into the other; length, 60 mm ---------------------------------Per set .55

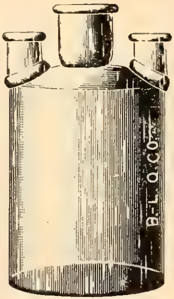
1780 **Bottles—Weighing, Grethen's.** Has ground-in pipette, with glass stopcock; for weighing corrosive liquids.

No.	A	B
Capacity, cc	2	10
Each	2.75	3.50

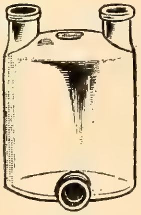
1785 **Bottle—Weighing, Lunge's.** Has ground-in stopper, with bulb and two glass stopcocks; for weighing corrosive liquids; capacity, about 15 cc --Each 6.00



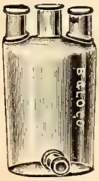
1790



1795



1800



1805

1790 **Bottles—Woulff's.** Of heavy glass; with two necks.

No.	A	B	C	D	E	F	G
Capacity, cc	125	250	500	1000	2000	4000	8000
Each	1.25	1.40	1.60	2.50	4.00	7.00	9.00

1795 **Bottles—Woulff's.** Of heavy glass; with three necks.

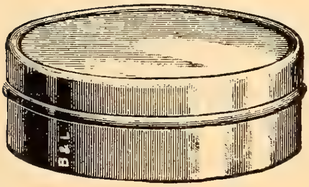
No.	A	B	C	D	E	F	G
Capacity, cc	125	250	500	1000	2000	4000	8000
Each	1.25	1.40	2.15	3.20	4.50	7.50	10.00

1800 **Bottles—Woulff's.** Of heavy glass; with two necks and tubulature near bottom.

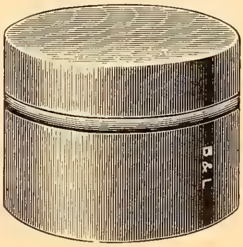
No.	A	B	C	D
Capacity, cc	500	1000	2000	4000
Each	2.10	3.20	4.50	7.00

1805 **Bottles—Woulff's.** Of heavy glass; with three necks and tubulature near bottom.

No.	A	B	C	D
Capacity, cc	500	1000	2000	4000
Each	2.00	3.40	5.00	8.00



11025



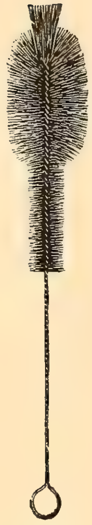
11030

11025 **Boxes—Tin.** Seamless.

No.	A	B	C	D	E	F	G
Capacity, gm	5	10	15	30	60	125	250
Per gross	1.30	1.90	1.90	2.50	4.00	6.20	8.80

11030 **Boxes—Turned Wood.**

No.	A	B	C	D	E	F	G
Capacity, gm	5	10	15	30	60	125	250
Per gross	1.50	1.75	2.25	3.00	4.80	8.50	16.00



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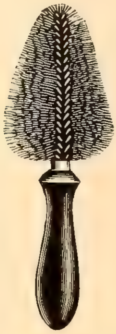

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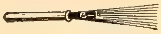

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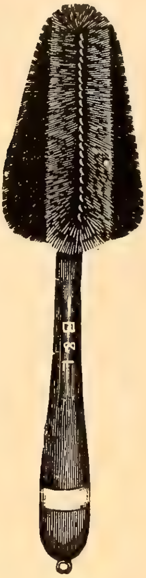

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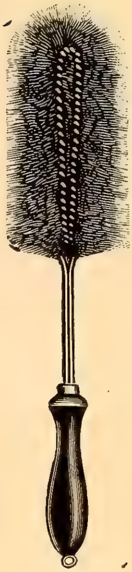

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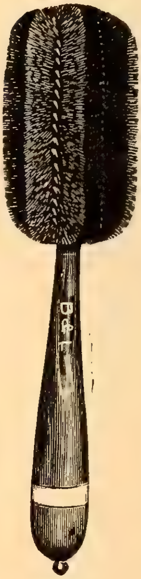


11055

11035 **Brushes—Acid.** Made of glass, cemented in glass handle; diameter, 6 mm ---------- Each .40

11040 **Brushes—Bristle.** With wooden handle; for cleaning small cylinders, etc. ---------- Each .25
Per dozen 2.25

11045 **Brushes—Bristle.** With wooden handle; for cleaning large cylinders.

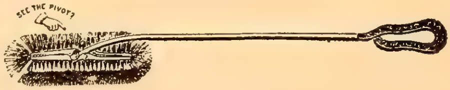
No.	A	B
Number of rows	3	4
Each	.30	.40
Per dozen	3.30	4.30

11050 **Brushes—Bristle.** With wooden handle; for cleaning small jars---Each .25
Per dozen 2.80

11055 **Brushes—Bristle.** With wooden handle; for cleaning large jars.

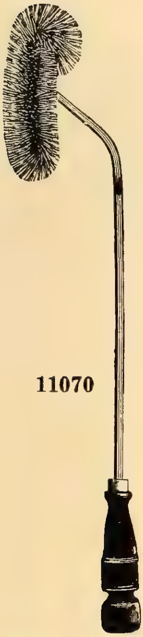
No.	A	B	C
Number of rows	3	4	6
Each	.30	.40	.45
Per dozen	3.00	4.40	4.60

11060 **Brushes.** For cleaning Babcock milk test bottles---------- Each .10
Per dozen 1.00

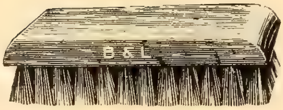

SEE THE PIVOT?

11065

11065 **Brush—Bottle, Pivoted.** With tufted end; has fine white bristles and heavy, stiff handle; length, 12 in.; by means of pivot attaching body of brush to handle, the brush always presents a firm and complete surface to inside of bottle, and tufted end reaches the smallest corners, thus assuring perfect cleanliness ---------- Each .25
Per dozen 2.50



11070



11105

11085

11090

11080-95-100

11070 **Brush—Flask.** With pliable end, which adapts itself to curvature of flask, facilitating thorough cleaning

Each	.30
Per dozen	2.80

11075 **Brushes—Dusting**

Each	.45
Per dozen	4.50

11080 **Brushes—Bristle.** Round; for marking, etc.

No.	A	B	C	D
Length of bristles, mm	15	17	19	21
Each	.07	.10	.12	.15
Per dozen	.75	1.00	1.20	1.40

11085 **Brushes—Camel's Hair.** Miniature size; bound in quill handle.

No.	A	B	C	D	E	F	G	H
Numbers	1	2	3	4	5	6	7	8
Length of hair, mm	8	10	12	14	16	18	20	22
Per dozen	.12	.14	.18	.20	.28	.30	.36	.40
Per gross	1.20	1.40	1.80	2.00	2.80	3.00	3.60	4.00

11090 **Brushes—Camel's Hair.** Flat; for dusting scale pans.

No.	A	B	C	D
Width, mm	12	25	37	50
Each	.20	.25	.30	.45
Per dozen	1.80	2.30	3.20	4.40

11095 **Brushes—Red Sable.** With wooden handle and metal ferrule.

No.	A	B	C	D	E	F	G	H
Numbers	0	1	2	3	4	5	6	7
Each	.18	.18	.18	.20	.22	.24	.27	.33
Per dozen	1.80	1.80	1.80	2.00	2.20	2.40	2.70	3.30

11100 **Brushes—Russian Sable.** With wooden handle and metal ferrule.

No.	A	B	C	D	E	F
Numbers	1	2	3	4	5	6
Each	.15	.15	.17	.20	.22	.24
Per dozen	1.50	1.50	1.70	2.00	2.20	2.40
No.	G	H	I	J	K	L
Numbers	7	8	9	10	11	12
Each	.26	.26	.28	.30	.32	.35
Per dozen	2.60	2.60	2.80	3.00	3.25	3.50

11105 **Brushes—Scrubbing.** With wooden handle, for laboratory use.

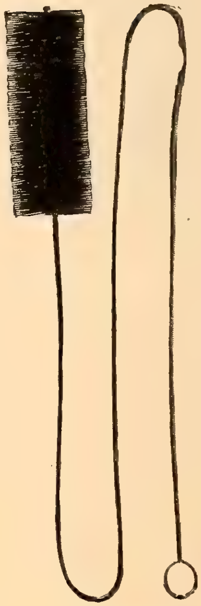
No.	A	B
Length, mm	115	150
Width, mm	40	75
Each	.20	.25

11110-25-60

11135-40

11115-30

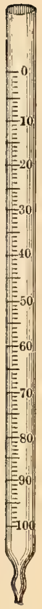
11145


11150-55

11110	**Brush—Test Tube.** On brass wire; bristle, with bristle end	Each	.10
		Per dozen	.95
		Per gross	9.00
11115	**Brush—Test Tube.** On brass wire; bristle, with sponge end	Each	.10
		Per dozen	.95
		Per gross	9.00
11120	**Brush—Test Tube.** On tinned iron wire; bristle	Each	.04
		Per dozen	.35
		Per gross	3.00
11125	**Brush—Test Tube.** On tinned iron wire; bristle, with bristle end	Each	.07
		Per dozen	.70
		Per gross	7.00
11130	**Brush—Test Tube.** On tinned iron wire; bristle, with sponge end	Each	.07
		Per dozen	.70
		Per gross	7.00
11135	**Brush—Test Tube.** Sponge, with rattan handle	Each	.10
		Per dozen	1.00
11140	**Brush—Test Tube.** Sponge, with whalebone handle	Each	.20
		Per dozen	1.80
11145	**Brush—Tube.** For cleaning narrow tubes; bristle, on tinned iron wire	Each	.03
		Per dozen	.25
		Per gross	2.20
11150	**Brush—Tube.** For cleaning burettes; bristle, on tinned iron wire one meter long	Each	.12
		Per dozen	1.25
		Per gross	12.00
11155	**Brush—Tube.** On brass wire, 1 meter long	Each	.20
		Per dozen	2.00

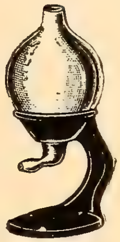
11160 **Brushes—Tube.** For cleaning cylinders, large tubes, bottles, etc.; bristle, on brass wire.

No.	A	B	C	D
Length, mm	250	300	375	500
Each	.13	.15	.20	.25
Per gross	1.35	1.50	2.00	2.50

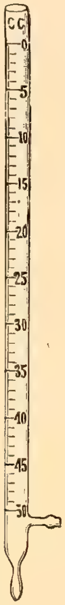


1840

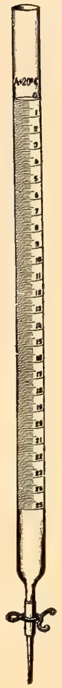
11165



3675



1850



1845

11165 Buckets—Agateware. Of agate nickel steel, seamless.

No.	A	B
Capacity (approx.) liters	8	12
Height, mm	175	225
Diameter (top) mm	240	290
Each	1.40	1.90

3675	**Bulb—Leveling.** Convenient for use in gas analysis and other purposes; mounted on iron stand	Each	3.00
3680	**Glass Bulb only**	Each	1.00

1840 Burettes—Mohr's. For pinchcock.

No.	A	B	C	D	E	F
Capacity, cc	5	10	10	25	25	50
Graduated, cc	1/10	1/10	1/20	1/10	1/20	1/5
Each	.36	.36	.40	.50	.54	.60

No.	G	H	I	J	K	L
Capacity, cc	50	75	75	100	100	100
Graduated, cc	1/10	1/5	1/10	1/2	1/5	1/10
Each	.70	.90	1.00	1.00	1.20	1.40

1845 Burettes—Mohr's Precision. Graduated to meet the specifications of the U. S. Bureau of Standards; adjusted at a temperature of 20° C; for pinchcock; without fittings.

No.	A	B	C	D
Capacity, cc	10	25	50	100
Graduated, cc	1/20	1/10	1/10	1/5
Each	3.50	4.00	5.00	6.00

1850 Burettes—Mohr's. With side tube for re-filling; for pinchcock; without fittings.

No.	A	B	C	D	E
Capacity, cc	10	25	25	50	50
Graduated, cc	1/10	1/5	1/10	1/5	1/10
Each	.46	.56	.60	.80	.90

No.	F	G	H	I
Capacity, cc	75	75	100	100
Graduated, cc	1/5	1/10	1/5	1/10
Each	1.00	1.10	1.30	1.50

1855

1860

1870

1875

1855 **Burettes—Mohr's.** With **Geissler's** stopcock; straight.

No.	A	B	C	D	E	F
Capacity, cc	10	10	25	25	50	50
Graduated, cc	1/5	1/20	1/10	1/20	1/5	1/10
Each	**1.40**	**1.45**	**1.70**	**1.80**	**1.80**	**1.90**

No.	G	H	I	J	K
Capacity, cc	75	75	100	100	100
Graduated, cc	1/5	1/10	1/2	1/5	1/10
Each	**2.00**	**2.20**	**2.25**	**2.50**	**2.75**

1860 **Burettes—Mohr's Precision.** Graduated to meet the specifications of the U. S. Bureau of Standards; with **Geissler's** glass stopcock; straight.

No.	A	B	C	D
Capacity, cc	10	25	50	100
Graduated, cc	1/20	1/10	1/10	1/5
Each	**4.50**	**5.50**	**6.50**	**7.00**

1865 **Burettes—Mohr's Standard.** Standardized by the U. S. Bureau of Standards, with control stamp and certificate; with **Geissler's** glass stopcock, straight.

No.	A	B	C
Capacity, cc	25	50	100
Graduated, cc	1/10	1/10	1/5
Each	**10.50**	**11.00**	**12.00**

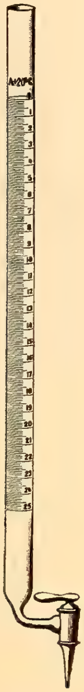
1870 **Burettes—Mohr's.** With **Geissler's** glass stopcock; straight; with side tube for re-filling.

No.	A	B	C	D	E
Capacity, cc	10	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/10	1/5
Each	**1.50**	**1.80**	**2.00**	**2.30**	**2.60**

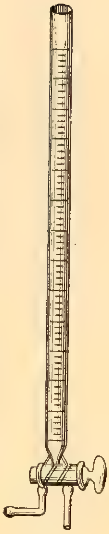
1875 **Burette—Mohr's.** With **Fresenius'** glass stopcock; bent.

No.	A	B	C	D	E
Capacity, cc	10	25	25	50	50
Graduated, cc	1/10	1/5	1/10	1/5	1/10
Each	**1.75**	**2.00**	**2.10**	**2.25**	**2.40**

No.	F	G	H	I
Capacity, cc	75	75	100	100
Graduated, cc	1/5	1/10	1/5	1/10
Each	**2.50**	**2.75**	**3.15**	**3.45**



1880-85



1890

1895-00

1880 **Burettes—Mohr's Precision.** Graduated to meet the specifications of the U. S. Bureau of Standards; with **Fresenius'** glass stopcock; bent.

No.	A	B	C	D
Capacity, cc	10	25	50	100
Graduated, cc	1/20	1/10	1/10	1/5
Each	4.50	5.50	6.50	7.00

1885 **Burettes—Mohr's Standard.** Standardized by the U. S. Bureau of Standard, with control stamp and certificate; with **Fresenius'** glass stopcock, bent.

No.	A	B	C
Capacity, cc	25	50	100
Graduated, cc	1/10	1/10	1/5
Each	10.50	11.00	12.00

1890 **Burettes.** With patent, three-way, glass stopcock.

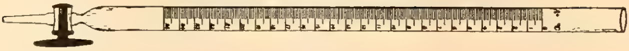
No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	3.25	4.00	4.65	5.25

1895 **Burettes—Mohr's Precision.** Graduated to meet the specifications of the U. S. Bureau of Standards; with three-way, glass stopcock.

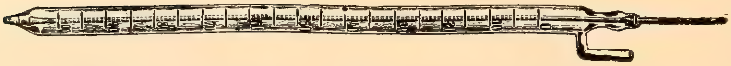
No.	A	B	C	D
Capacity, cc	10	25	50	100
Graduated, cc	1/20	1/10	1/10	1/5
Each	5.75	6.50	7.50	8.00

1900 **Burettes—Mohr's Standard.** Standardized by the U. S. Bureau of Standards, with control stamp and certificate; with three-way, glass stopcock.

No.	A	B	C
Capacity, cc	25	50	100
Graduated, cc	1/10	1/10	1/5
Each	11.00	12.00	13.00



1905



1910

1905 **Burettes—Rudnick's.** Modified form, intended for use with caustic alkali solutions (see Journal of the American Chemical Society, August, 1911); fitted with **solid silver stopcock** of pure metal. Geissler's straight form, accurately ground to prevent leakage; this stopcock does not require frequent lubrication and has been proved, in severe tests, not to stick after long-continued usage; it is not subject to the objections of the usual glass stopcocks, which show a tendency to stick, after being used for any length of time with such solutions, and to leak from the rapid wear, if the stopcock or shell is not broken before this takes place; each burette has both a glass and silver stopcock, which may be used interchangeably as required, both being accurately ground to fit the same shell; graduated according to the U. S. Bureau of Standards.

No.	A	B
Capacity, cc	25	50
Graduated, cc	1/10	1/10
Each	**11.00**	**12.50**

(Other sizes and styles of stopcocks quoted on request.)

1910 **Burettes—Geissler's.** With ground-glass rod to serve as stopcock.

No.	A	B	C
Capacity, cc	25	50	100
Graduated, cc	1/10	1/10	1/5
Each	**1.00**	**1.50**	**1.75**

1915 **Burettes—Shellbach's.** With dark blue stripe on white enameled background, for accurate reading of the meniscus; for pinchcock; without fittings.

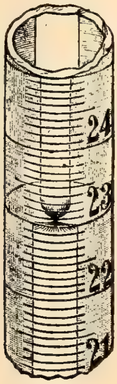
No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**1.35**	**1.70**	**2.65**	**2.40**

1920 **Burettes—Shellbach's.** With dark blue stripe on white enameled background, as above; for pinchcock; with side tube for re-filling, as shown in illustration, No. 1850; without fittings.

No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**1.45**	**1.80**	**2.80**	**2.55**

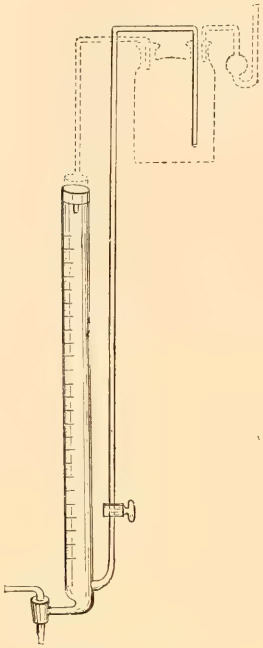
1925 **Burettes—Shellbach's.** With dark blue stripe on white enameled background, as above; with **Geissler's** stopcock, straight, as shown in illustration, No. 1855.

No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**2.70**	**3.30**	**4.30**	**4.00**

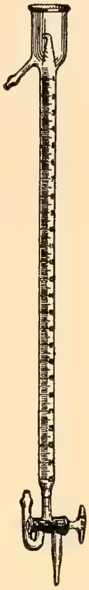


1935

1955



1965



1970

1930 **Burettes—Shellbach's.** With dark blue stripe on white enameled background; with patent, three-way, glass stopcock, as shown in illustration, No. 1890.

No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**3.75**	**5.00**	**6.00**	**6.50**

1935 **Burettes—Schellbach's.** With two sides white enameled and with transparent, vertical strip behind graduations for accurate reading of the meniscus; for pinchcock; without fittings.

No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**1.35**	**1.70**	**2.75**	**2.50**

1940 **Burettes—Schellbach's.** With two sides white enameled and with transparent, vertical strip behind graduations for accurate reading of the meniscus; with **Geissler's** stopcock, straight.

No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**3.00**	**3.50**	**4.50**	**2.25**

1945 **Burette Caps.** To protect inside burette from dust.

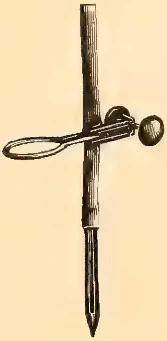
No.	A	B	C
For burettes of capacity, cc	25	50	100
Each	**.10**	**.16**	**.20**

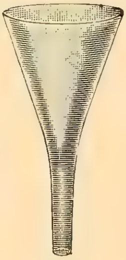
1965 **Burettes—Gawalowsky's.** With side tube and ground stopcock to connect with reservoir for refilling.

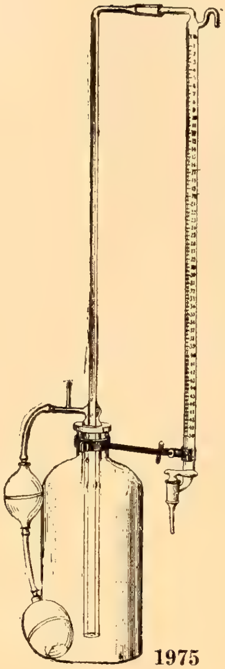
No.	A	B	C	D
Capacity, cc	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	**3.00**	**3.50**	**4.25**	**4.50**

1970 **Burettes—Automatic.** With three-way stopcock, zero point and overflow cup, with dark blue enameled stripe on white background for accurate reading of the meniscus.

No.	A	B	C
Capacity, cc	25	50	100
Graduated, cc	1/10	1/10	1/10
Each	**7.00**	**8.00**	**12.00**


2010


2045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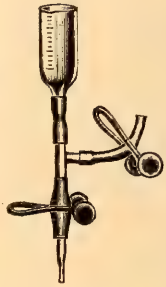
2015

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2040

1975 **Burettes—Automatic Zero, Squibb's.** Latest form, filled by pressure from rubber bulb; all joints ground air-tight; with dark blue stripe on white enameled background for accurate reading; price includes complete apparatus, with bulbs, reservoir, clamp and burette.

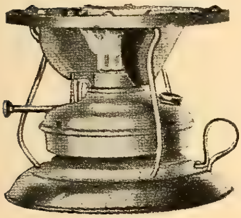
	No. A	B
Capacity, cc	25	50
Graduated, cc	1/10	1/10
Each	**10.00**	**11.00**

2010 **Burette Attachment.** For use on burettes without stopcocks; consists of pinchcock, glass tip and rubber tubing to connect with burette.

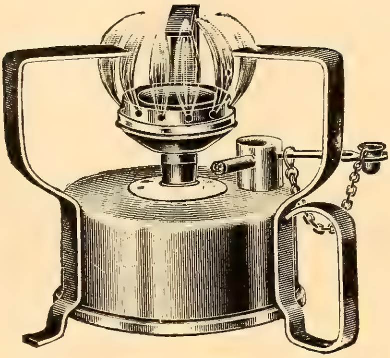
	No. A	B	C
Size	Small	Medium	Large
Each	**.25**	**.30**	**.35**

(Unless otherwise specified, medium size will be supplied.)

2015	**Burette Attachment.** For connecting burette with reservoir for refilling; consists of T-tube, tip, three rubber connections and two pinchcocks	Each	**.60**
2020	**Burette Tips.** Of glass, for attachment to Nos. 1840, 1845, 1850, 1915, 1920 and 1935	Per Dozen	**.50**
2025	**Burette Floats—Beutel's**	Each	**.35**
2030	**Burette Floats—Erdmann's.** Plain form	Each	**.30**
2035	**Burette Floats—Schulz's.** With thermometer	Each	**1.50**
2040	**Burette Floats—Vollhard's.** With glass points to prevent adhering to walls of burette	Each	**.70**
2045	**Burette Funnel.** Of small size; for filling burettes	Each	**.20**



11175



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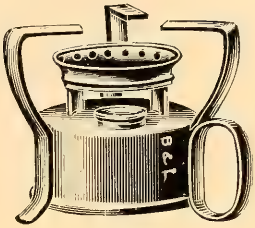
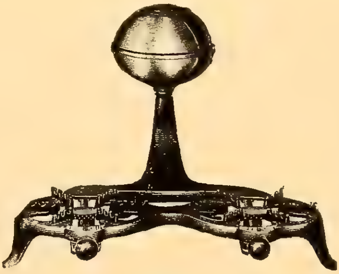
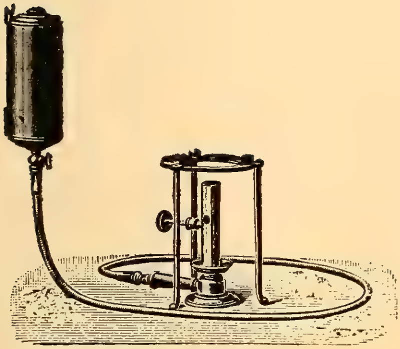


11185

11175	**Burner—Alcohol Stove.** For denatured alcohol; made of nickel-plated brass, and readily adjustable, giving blue and intensely hot flame; diameter, 6⅜ in.; height over all, 5½ in. ____________________Each	3.20
11180	**Burner—Alcohol Stove.** So arranged that gas is generated by vaporizing the alcohol; will boil a quart of water in nine minutes and burn for more than an hour with one filling ____________________Each	1.20
11185	**Burner—Alcohol Stove.** Made of highly polished brass; an excellent stove, so arranged that gas is generated by vaporizing the alcohol; consumption of alcohol very moderate considering intense heat obtained; will boil a liter of water in nine minutes and burn for more than an hour with one filling; adapted for sterilizing, etc.; especially desirable where gas cannot be obtained ____________________Each	.90



11200



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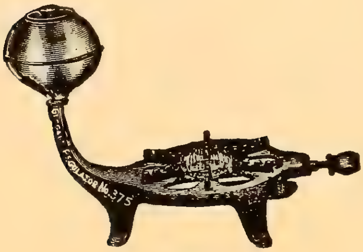
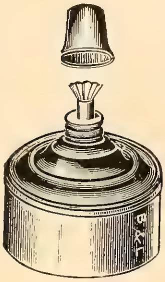


11195

11190	**Burner—Barthel's Alcohol.** Produces a smokeless, blue flame of great intensity; requires no wick, cannot explode and is easily regulated; complete with reservoir and 1½ meters of flexible metallic tubing; is equal to two Bunsen burners ____________________Each	12.50
11195	**Burner—Alcohol.** Manufactures its own gas by vaporizing the alcohol; no wick is used; size of flame readily adjusted; is smokeless and safe, substantial in construction and reasonable in price; suitable for use with denatured alcohol, which makes it economical to maintain; one filling of reservoir (about 1 pt.) will last, with full flame, about 1⅓ hours, with medium flame, 5 to 6 hours; japanned ____________Each	4.50
11200	**Burner—Alcohol.** Same as No. 11195 above, but **double burner**___Each	7.50



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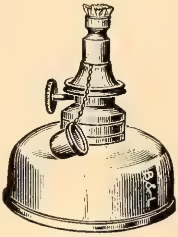
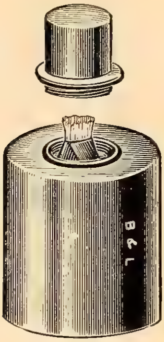
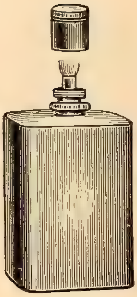


11210-15



11220-25



11230

11205 **Burners—Alcohol Lamps.** Of polished brass; with screw top and metal cap.

No.	A	B	C
Capacity, cc	60	125	250
Each	.75	.90	1.10

11210 **Burners—Alcohol Lamps.** Of polished brass; with screw top, metal cap and ratchet burner.

No.	A	B
Capacity, cc	125	200
Each	.60	.75

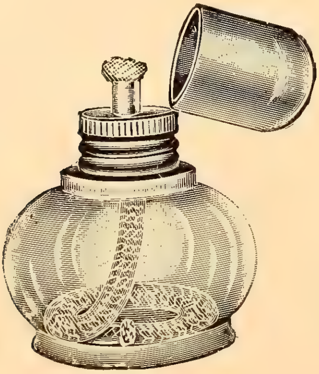
11215 **Burners—Alcohol Lamps.** Nickel-plated.

No.	A	B
Capacity, cc	125	200
Each	.75	.90

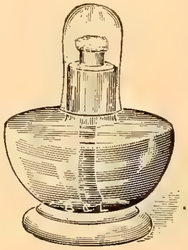
11220 **Burners—Alcohol Lamps.** Made of polished brass; wick-holder lifts out and can be adjusted to any angle ________Each .90

11225 **Burners—Alcohol Lamps.** Same at No. 11220, but nickel-plated__Each 1.00

11230 **Burners—Alcohol Lamps.** With screw cap; nickel-plated; dimensions: 1¾ x 1¾ x 2¾ in. high; capacity, 4 oz.________Each 1.90



4430



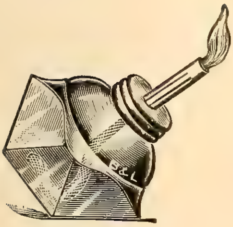
4435

4430 **Burners—Alcohol Lamps.** Of rounded form, of glass, good quality; with heavy, brass, nickel-plated burner and cap; wick included.

No.	A	B	C
Capacity, cc	60	125	250
Each	.33	.37	.43

4435 **Burners—Alcohol Lamps.** Bowel shape, with foot; of clear, white glass; with metal burner and glass cap ground on; wick included.

No.	A	B	C
Capacity, cc	30	60	100
Each	.30	.40	.50



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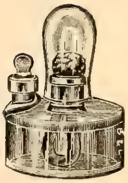
4445



4450

4440 **Burners—Alcohol Lamps.** Of glass, with metal burner and metal cap; shape is such that lamp may be set at various angles; wick included.

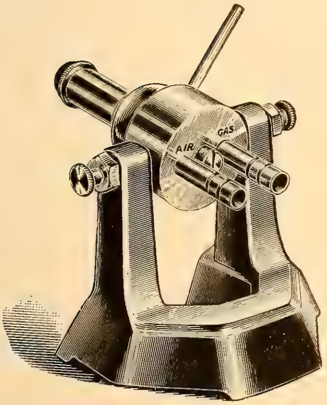
No.	A	B	C
Capacity, cc	40	120	120
Diameter of burner, mm	5	7	12
Each	.50	.60	.65

4445 **Burners—Alcohol Lamps.** Cylindrical; of clear, white glass; with metal burner and glass cap ground on; wick included.

No.	A	B	C
Capacity, cc	60	100	250
Each	.18	.22	.27

4450 **Burners—Alcohol Lamps.** Cylindrical; of glass; with metal burner and glass cap ground on; side tubulation, with glass stopper, for filling.

No.	A	B	C
Capacity, cc	30	60	100
Each	.40	.45	.55



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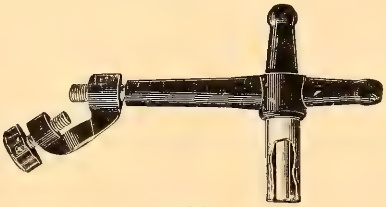
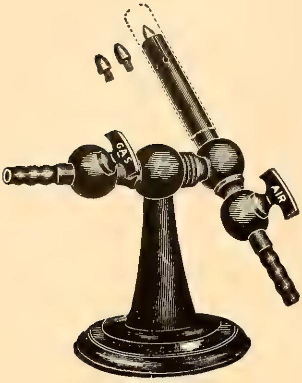


11240

11240 **Blast Lamp—Boyce's.** For gas; with clamp for attachment to apparatus support and for adjustment of burner tube to any desired angle ____Each 2.25

11245 **Blast Lamp—Fletcher's Compound.** The range of this burner, from a delicate pointed jet to a large flame, is sufficient for all glass work; a powerful blower is required _______________________________Each 12.00



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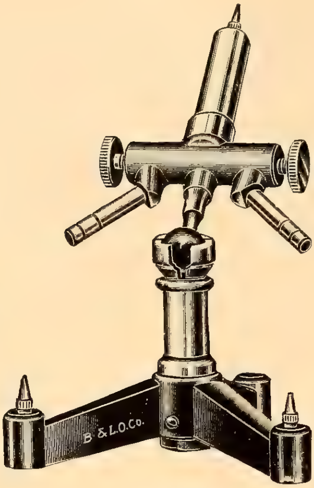

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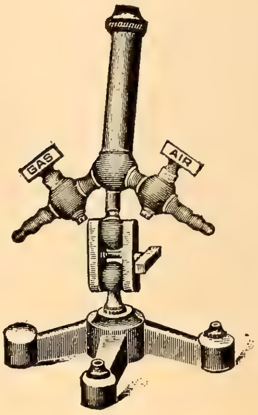
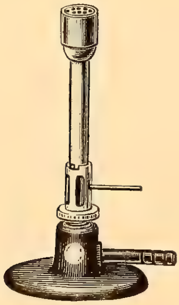


11260

11250	**Blast Lamp—Bunsen's.** For gas; adjustable, with separate stopcocks and controlling air and gas; improved form with movable sleeve and three tips	Each	5.75
11255	**Burner—Blast, Massachusetts Institute of Technology pattern.** Readily detachable from stand for use as hand blowpipe; mounted on ball socket, set of three gas nipples and two sleeves; needle valves afford easy and accurate regulation of both gas and air supply	Each	5.00
11260	**Blast Lamp—Wiesnegg's.** French form; with ball joint for adjustment to any position and stopcocks for air and gas supply	Each	6.50



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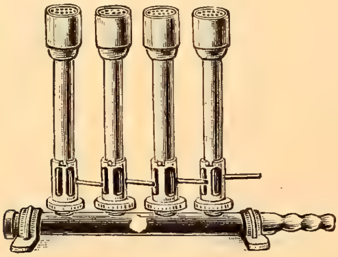
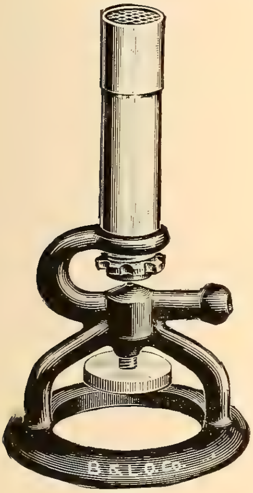


11272

Burners—High Temperature. Air and gas can be regulated separately, permitting them to be used for various gases; special feature is entire elimination of the cold air zone, whole flame being practically uniform in temperature.

11265	**Burner.** Small; 150 mm high, with 20 mm grid	Each	1.80
11268	**Burner.** Medium; 165 mm high, with 25 mm grid	Each	2.00
11271	**Burned.** Large; 175 mm high, with 28 mm grid	Each	2.75
11272	**Row of four No. 11265 burners**	Each	10.80
11273	**Row of four No. 11268 burners**	Each	16.00
11274	**Row of four No. 11271 burners**	Each	21.50



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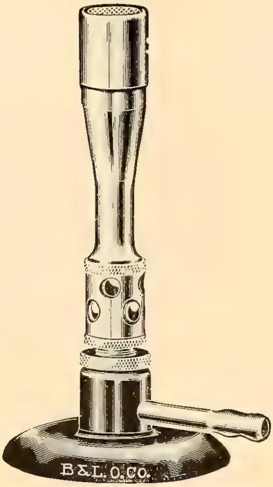
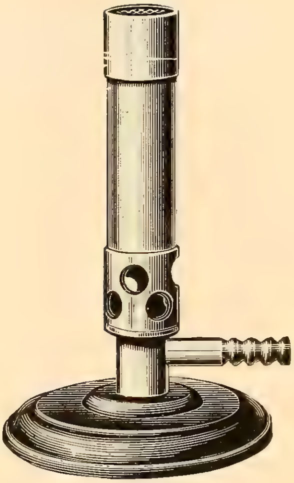


11280


11285

11275 **Burners—High Temperature.** Adjustable for air and gas and therefore adaptable for all gases except acetylene; available temperature reaches 2100° f and over; made of brass, with heavy, cast-iron base.

No.	A	B	C
Height, mm	133	150	185
Diameter of Mixer, mm	18	25	28
Each	1.65	2.10	3.00

11280 **Burners—High Temperature.** Patented; another efficient type, also provided with air and gas supply adjustment and can be used with artifical, natural, gasoline gas, etc.

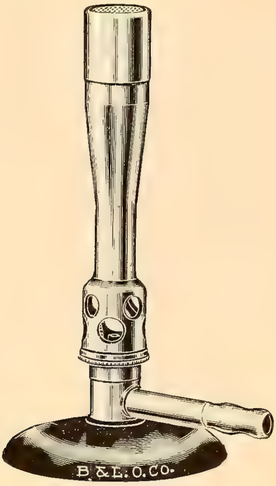
No.	A	B
Height, mm	155	190
Diameter of Flame, mm	25	30
Each	3.00	3.50

11285 **Burners—High Temperature.** Adapted for artificial (coal or water gas), with available temperature reaching 2100° F. and over; made of brass, mounted on a heavy, cast-iron base.

No.	A	B	C
Height, mm	133	150	185
Diameter of Mixer, mm	18	25	28
Each	1.65	2.10	3.00

THERMO-REGULATORS

A complete line is to be found on pages 387 to 389.



11290-91-92

Burners—High Temperature, Meker's. The original French burners, designed by Dr. Meker, formerly of the Paris Municipal School of Physics and Applied Chemistry; have nickel grids; only the sizes in general use here listed; other shapes, blast burners, etc., quoted upon request.

For Artificial Gas

11290

No.	A	B	C	D	E
Height, mm	115	130	155	190	250
Diameter of Flame, mm	16	20	24	30	43
Each	2.25	2.40	3.00	3.20	7.20

For Natural Gas

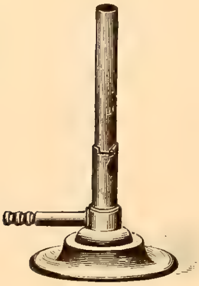
11291

No.	A	B	C	D	E
Height, mm	115	130	155	190	250
Diameter of Flame, mm	16	20	24	30	43
Each	2.25	2.40	3.00	3.20	7.20

For Gasoline Gas

11292

No.	A	B	C	D	E
Height, mm	115	130	155	190	250
Diameter of Flame, mm	16	20	24	30	43
Each	2.25	2.40	3.00	3.20	7.20



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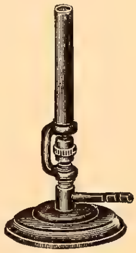

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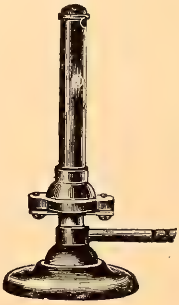
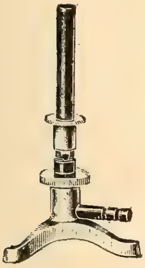


11310

11305	**Burner—Bunsen's.**	Usual size, with air regulator	Each	.35
11310	**Burner—Bunsen's.**	For acetylene gas	Each	2.25
11315	**Burner—Bunsen's.**	With adjustment for air and gas	Each	1.00



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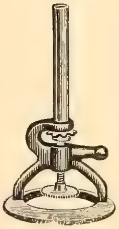

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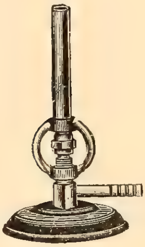

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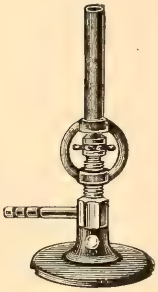

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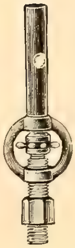
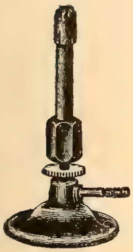


11335

11320	**Burner—Bunsen's Adjustable.** Readily adjustable for gas and air; a desirable burner for universal use	Each	1.00
11322	**Burner—Boyce's Adjustable.** For coal or gasoline gas; with separate regulators for gas and air supplies	Each	.70
11325	**Burner—Fletcher's.** Improved form; adjustable, with regulator for air and gas	Each	1.20
11330	**Burner—Bunsen's Combination.** Adjustable, for coal or gasoline gas; with regulators for air and gas; height, 7 in.	Each	1.25
11335	**Burner—Bunsen's Combination.** Same as No. 11330 above, but without base; for screwing into gas pipes	Each	1.10



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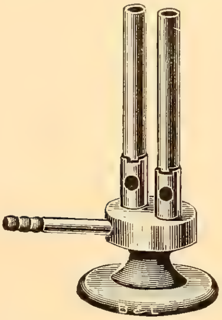

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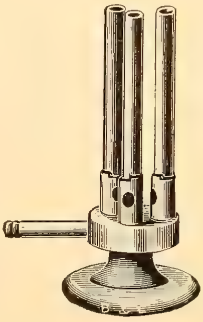
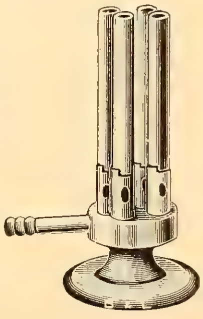
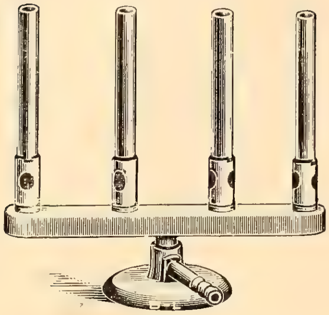


11360



11365

11340	**Burner—Boyce's Acme.** For coal or gasoline gas	Each	1.80
11345	**Burner—Boyce's Acme.** Same as No. 11340 above, but without base; for screwing into gas pipes	Each	1.50
11355	**Burner—Bunsen's Multiple-Tubed.** With two tubes	Each	1.75
11360	**Burner—Bunsen's Multiple-Tubed.** With three tubes	Each	2.20
11365	**Burner—Bunsen's Multiple-Tubed.** With four tubes	Each	2.40



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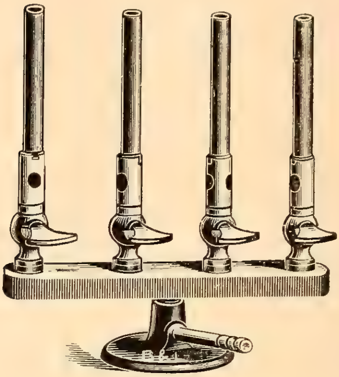
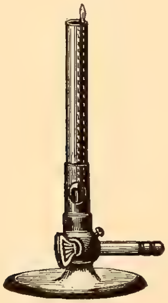


11385

11370	**Burner—Bunsen's Multiple-Tubed.** With three tubes in line------Each	2.00
11375	**Burner—Bunsen's Multiple-Tubed.** With four tubes in line------Each	2.60
11380	**Burner—Bunsen's Multiple-Tubed.** With three tubes in line, having stopcocks ------Each	5.20
11385	**Burner—Bunsen's Multiple-Tubed.** With four tubes in line,, having stopcocks ------Each	6.40



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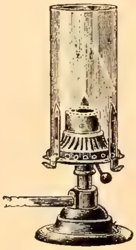
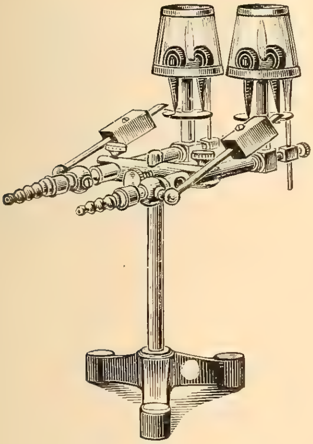


11395

11390	**Burner—Bunsen's.** With pilot flame ------Each	2.25
11395	**Burner—Argand.** Low form; with glass chimney, 7 in. hgh; flame is adjustable and can be burned very low------Each	1.25
11396	**Burner—Argand.** Same as No. 11295 above, but with iron chimney 4 in. high; very useful for heating purposes, giving a steady, large flame ------Each	1.25



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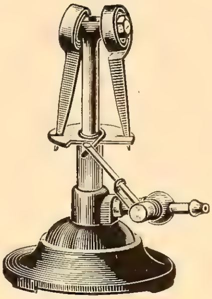

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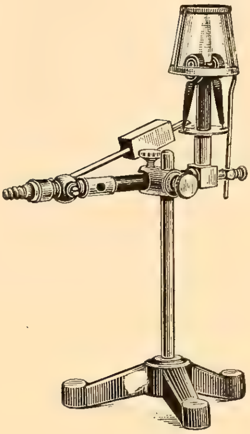
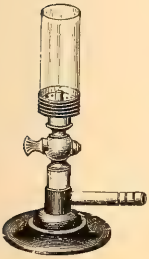


11402

11400	**Burner—Koch's Safety.** So constructed that the flow of gas is shut off when flame goes out from any cause, such as low pressure or draughts; ideal for use with incubators and similar apparatus, which must run for extended periods; large size, with two burners and adjustable support	Each	22.40
11402	**Burner—Koch's Safety.** Same as No. 11395 above, but with one burner	Each	12.80
11405	**Burner—Koch's Safety.** Medium size, with support	Each	6.80
11410	**Burner—Koch's Safety.** Small size, with support	Each	6.40



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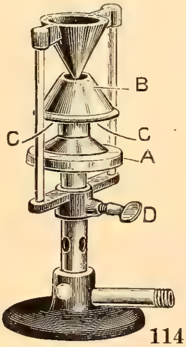

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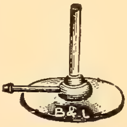

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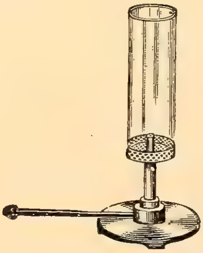
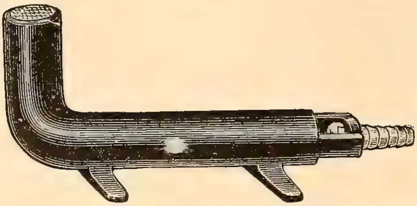


11425

11415	**Burner—Greenman's.** Unexcelled for use with any thermostat on incubators, sterilizers, etc.; inside, at "A," is copper gauze diaphragm, 5 cm in diameter, which, because of its size, does not retard the flow of gas but prevents the "snapping back," which so often occurs when the regulator reduces the gas flow; when the gas flows freely, the extra air required is admitted through openings, "CC"; set-screw "D" is used to raise or lower the cone-shaped top according to the size of flame; top cone prevents the sooting of the incubator bottom, which frequently occurs with regular Bunsen burners	Each	9.60
11420	**Burner—Bunsen's Micro.** Permits a very small flame to be obtained; nickel-plated; height, 60 mm, without mica chimney	Each	.65
11425	**Burner—Bunsen's Micro.** With Chimney	Each	1.45
11427	**Burner—Bunsen's Micro.** With stopcock and glass chimney; height, 165 mm	Each	2.50

11450



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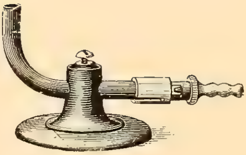


11430

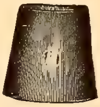
11455

11430	**Burner—Bunsen's.** Low form, with air regulator	Each	.60
11435	**Burner—Bunsen's.** Low form, with air regulator and mica chimney	Each	1.00
11440	**Burner—Bunsen's.** With tube 12 mm in diameter, giving a flame twice the size of 11455 above	Each	1.60
11445	**Burner—Boekel's.** Low shape, extra large, with gauze top; height, 5 in.; diameter, 2¼ in.; extreme length, 14 in.	Each	2.40
11450	**Burner—Illuminating.** Height, 200 mm	Each	1.20
11455	**Burner—Illuminating.** Height, 300 mm	Each	1.70

11460

11465

11470



11475

11480

11460 **Burner Tip.** Wing top; for bending glass tubing.

Size	A	B
For burners of	7/16″	1/2″ diameter
Each	.12	.15

11465 **Burner Tip.** Gauze top; gives large, round flame.

Size	A	B
For burners of	7/16″	1/2″ diameter
Each	.25	.30

11470 **Burner Tip.** Crown top; gives round flame.

Size	A	B
For burners of	7/16″	1/2″ diameter
Each	.50	.55

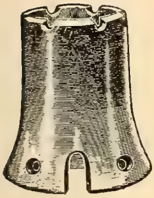
11475 **Burner Chimney.** Of Russian iron.

Size	A	B
Diameter at bottom, inches	2	2½
Each	.12	.13

11480 **Burner Chimney.** Of sheet iron; with support.

Size	A	B
For burners of	7/16″	1/2″ diameter
Each	.75	.85

11485	**Burner Attachment.** For supporting chimney; for use on burner No. 11435 above	Each	.40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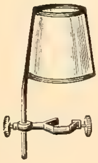
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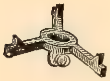
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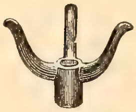
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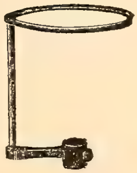

11510

11495

11487 **Mica Chimney.** With clamp to attach to burner................Each 1.80

11490 **Burner Star.** Support for chimney.

Size	A	B
For burners of	7/16″	1/2″ diameter
Each	.25	.27

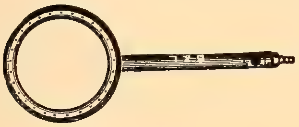
11495 **Burner Fork.** For supporting burners on apparatus stand........Each .25

11500 **Burner Guard—Vitrified Earthenware.** For protecting the flame from draughts; can also be used as a support; height, 9 in.; bottom, 8 in.; top, 5 in. ....Each .50
Per Dozen 5.60

11505 **Burner Tripods.** For supporting dishes, etc., over burner; may be used with Burner Tip No. 11470.

No.	A	B
For burners of diameter, in.	7/16	½
Each	.15	.20

11510 **Burner Attachment.** For supporting dishes, etc. ....Each .90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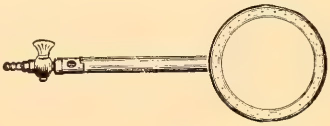
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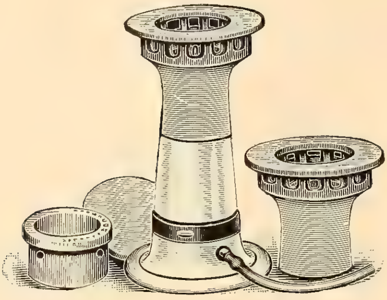
11525 **Burners—Bunsen's Ring Form.** For use on apparatus support for heating funnels, flasks, etc.; with air regulator.

No.	A	B	C	D	E
Diameter of rings, mm	75	100	125	150	200
Each	1.60	1.75	2.00	2.20	3.00

11530 **Burners—Bunsen's Ring Form.** With stopcock and air regulator.

No.	A	B	C	D	E
Diameter of rings, mm	75	100	125	150	200
Each	2.60	2.75	3.00	3.20	4.00



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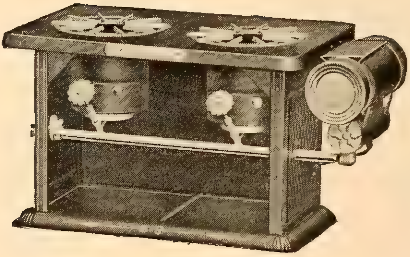


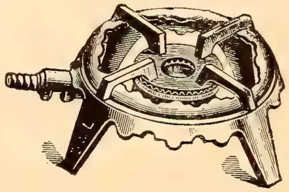
11540

11535 **Burner—Chaddock's Non-corrodible.** Will be appreciated by every chemist who has used metal burners in hoods, as it is incorrodible, the gas exit being of glass and the rest of porcelain and white fire clay; consists of three sections serving for various laboratory requirements, and is supplied with flame spreader, asbestos disc and asbestos rings; small chimney is for platinum triangles; since it contains no metal parts, is highly recommended for poison analysis ____________Each 3.00

Separate Parts for No. 11535:

Towers	Each	.60
Rings	Each	.25

11540 **Burner—Double.** For kerosene; blue flame ____________Each 7.20



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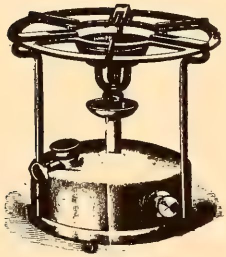

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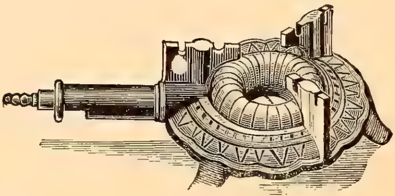


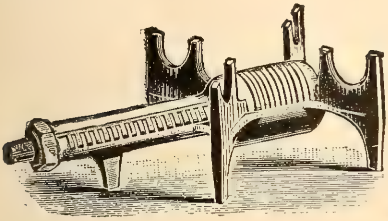
11555

11545 **Burner—Vaporized Oil.** With reservoir and support; burner is operated under air pressure, which is supplied by pump shown in illustration; gives intense heat and burns ordinary kerosene oil; furnished complete, with directions for operating____________Each 6.20

11550 **Burner—Concentric.** A very satisfactory burner at a low price, making it desirable where a large number of burners are to be used; height, 80 mm; diameter, 150 mm ____________Each .90

11555 **Burners—Fletcher's Radial.** Made of annealed cast-iron and very strong; works equally well with coal or water gas, producing practically solid flame, which does not run to a point in the center.

No.	A	B
Diameter of burner ring, mm	90	125
Each	2.40	3.20



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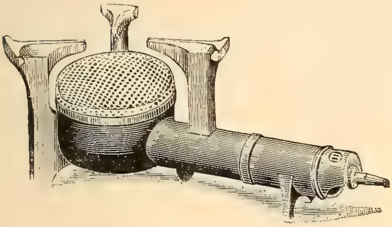

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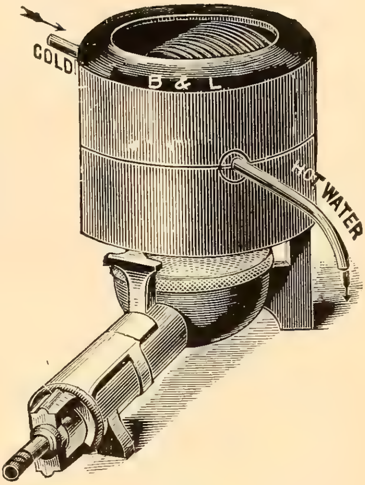


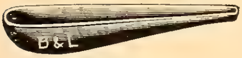
11580

11560 **Burner—Fletcher's Radial.** Very strong, being made in one casting; will boil 2000 cc of water in twelve minutes ....Each 2.00

11565 **Burner—Fletcher's Solid Flame.** For large pans and quick boiling.

Size	A	B
Diameter, mm	75	100
Each	1.60	2.00

11580 **Burner—Instantaneous Water Heater.** When connected with cold water supply, will deliver hot water in three seconds after lighting; by proper regulating of the gas and water supplies, boiling, hot or warm temperature may be maintained; water attachment is removable, leaving the burner for other purposes ....Each 10.80



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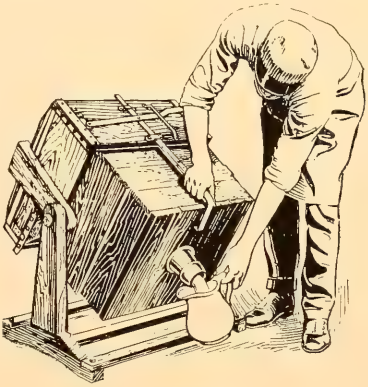
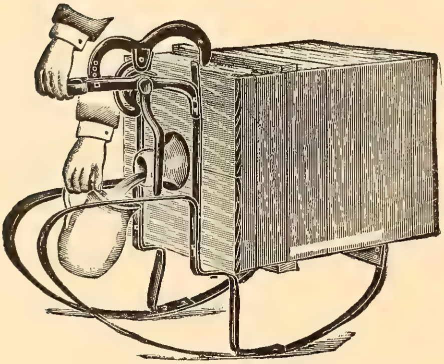


11593

11590 **Capsule.** Of horn ....Each .25

11593 **Carboy Inclinator.** A safe apparatus for pouring dangerous acids; will hold any size carboy; returns to upright position when released; now being used by many important industrial plants; recommended by compensation insurance companies and admitted for exhibition in the American Museum of Safety ....Each 17.50



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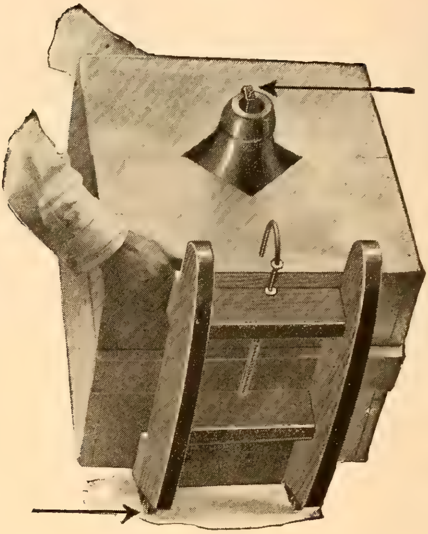
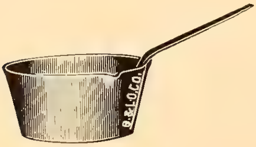


11600

11595 **Carboy Inclinator—Flaherty's.** A simple device, whereby a carboy is tilted and its contents poured out at will, with little exertion and without spilling or splashing; single movement of lever locks inclinator to the carboy; strongly built of iron with all cast parts malleable ____________________ Each 7.50

11600 **Carboy Rocker.** With air vent; can be attached to carboy, or detached, in fraction of a minute; all wood parts are of seasoned oak, 1 1/8 in. thick; can be operated by one man ____________________ Each 7.20



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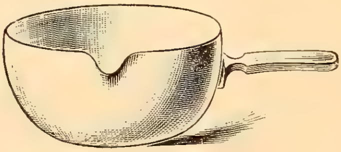


5535

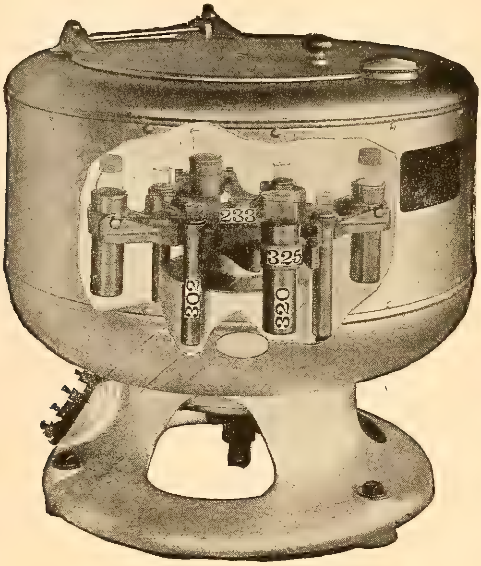
11605 **Casseroles—Agateware.** Agate nickel steel; seamless.

No.	A	B	C	D
Capacity (approx.), cc	500	750	1000	2000
Diameter, mm	110	125	150	175
Each	.40	.45	.50	.55

5535 **Casseroles.** Coors porcelain; glazed with exception of rim; with lip and flat, porcelain handle.

Size No.	1	2	3	3a	4
Outside diameter, mm	50	70	85	95	110
Inside diameter, mm	47	66	80	90	105
Height, mm	25	35	45	50	62
Capacity, cc	30	75	150	250	375
Each	.42	.48	.60	.84	1.08

Size No.	4a	5	6	7
Outside diameter, mm	135	135	165	175
Inside diameter, mm	130	130	160	170
Height, mm	90	80	95	130
Capacity, cc	500	750	1250	2000
Each	1.38	1.68	2.40	4.20



11610-11

11610 **Centrifuges—Electric.** International Equipment Company's size 1, Type A; designed for a compact, high-power centrifuge with moderately large capacity, conveniently arranged for research and routine work in bacteriological, physiological and chemical laboratories of hospitals, medical schools, dairies and health departments; substantial, bell-shaped casting furnishes a rigid base, a housing for the electric motor and a strong bearing for the motor shaft extension, which carries centrifuge heads; heads are made of material and dimensions suitable for loads and speeds they sustain and are accurately machined and balanced; enclosing case of steel and iron is provided for the sake of both safety and efficiency, affording ample protection to operator against accident; finish, of aluminum bronze paint outside and white enamel inside, is both attractive and durable; provision is made for convenient oiling; height, closed, 23 in.; open, 28 in.; diameter, 17 in.; shipping weight, 160 lbs.

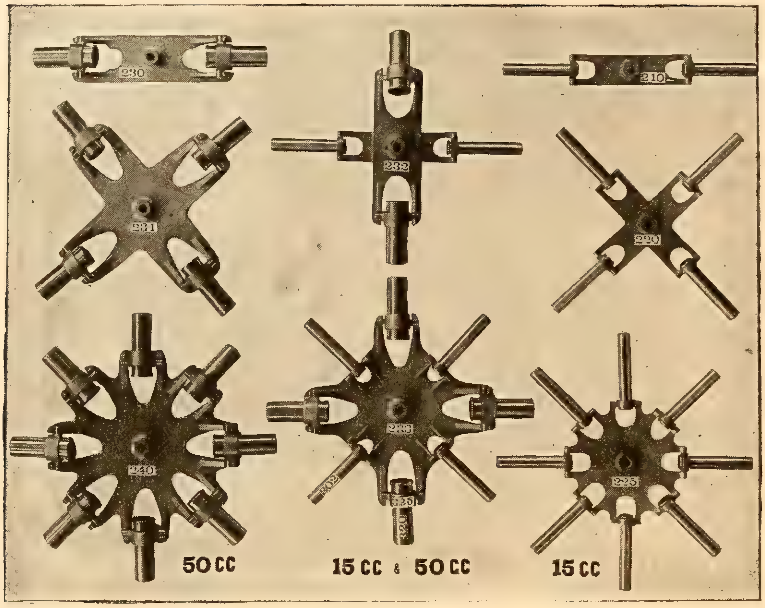
No.	A	B
Current	110 V., D.C.	220 V., D.C.
Each	84.50	88.40

No.	C	D
Current	110 V., A.C., 60 Cycles	220 V., A.C., 60 Cycles
Each	88.40	92.30

11611 **Centrifuges—Electric.** International Equipment Company's Size 1, Type B; same as No. 11610 above, but height, closed:23 in.; open, 33 in.; diameter, 17 in.; shipping weight, about 270 lbs.

No.	A	B
Current	110 V., D.C.	220 V., D.C.
Each	110.50	114.40

No.	C	D
Current	110 V., A.C., 60 Cycles	220 V., A.C., 60 Cycles
Each	127.40	127.40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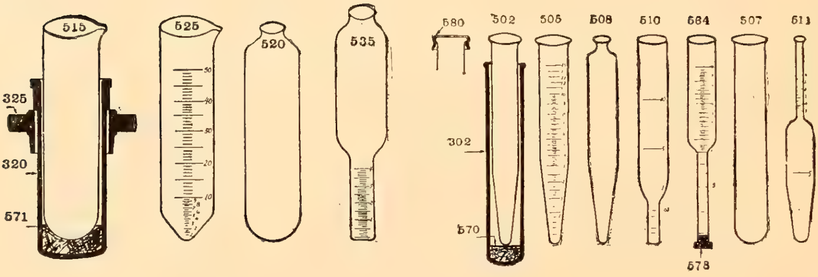
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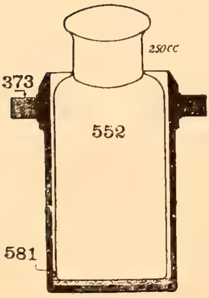
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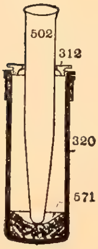
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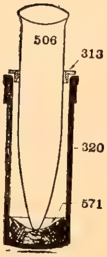
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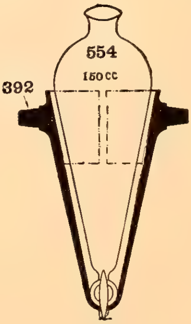
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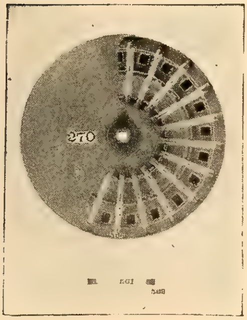
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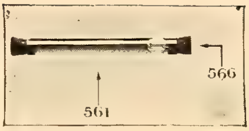
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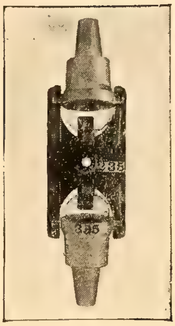
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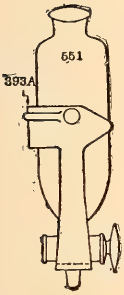
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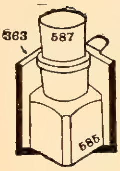
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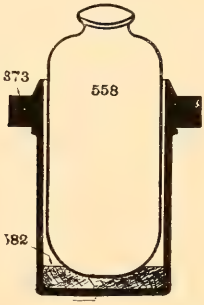
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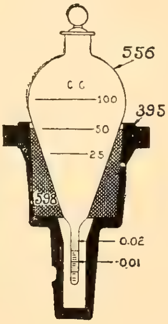
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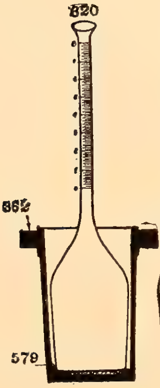
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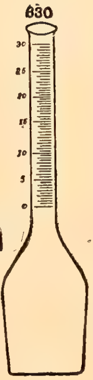
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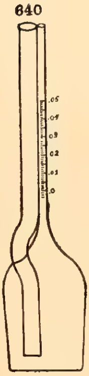
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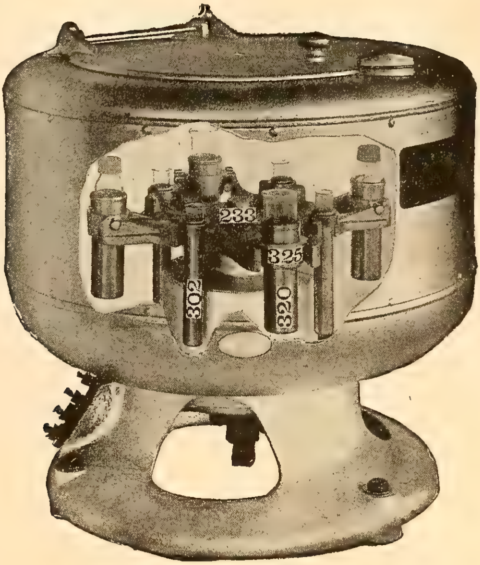
11616 **Centrifuge Accessory Equipment** extra:

210	2-tube, 15 cc head and attached trunnion rings	Each	3.90
220	4-tube, 15 cc head and attached trunnion rings	Each	9.10
225	8-tube, 15 cc head and attached trunnion rings	Each	15.60
230	2-tube, 50 cc head only	Each	4.55
231	4-tube, 50 cc head only	Each	9.10
232	4-tube combination head only, with attached 15 cc trunnion rings	Each	9.10
233	8-tube combination head only, with attached 15 cc trunnion rings	Each	16.90
235	2-place head only	Each	4.55
240	8-tube, 50 cc head only	Each	15.60
242	4-place head for 6 oz. nursing bottles	Each	8.45
270	Board of Health Disc, without tubes	Each	15.60
280	5 in. diameter perforated bronze basket with copper drip can	Each	28.60
302	15 cc metal tubes, Cornell style, with rubber cushions	Each	.72
312	Reducing caps for 15 cc glass tubes in 50 cc metal tubes	Each	.20
313	Reducing caps for 25 cc glass tubes in 50 cc metal tubes	Each	.20
320	50 cc metal tubes, Cornell style, with rubber cushions	Each	.85
325	50 cc trunnion rings	Each	.52
362	Babcock test trunnion cups with rubber pads	Each	.78
363	Square trunnion cups for sputum bottles No. 585 (Trunnion carriers for special sputum bottles can be adapted to requirements.)	Each	1.95
368	Trunnion ring for metal tube No. 370	Each	1.95
370	Metal tube for 6 oz. nursing bottles, with rubber cushion	Each	1.95
373	Trunnion cups for 250 cc bottles Nos. 552 and 553, with rubber cushions	Each	4.55
392	Trunnion carriers for 150 cc Squibb Separatory funnels	Each	2.60
393a	Trunnion carriers for Shaw Separatory funnels No. 551	Each	1.95
502	15 cc plain glass tubes	Per dozen	2.08
		Per six dozen	7.41
505	15 cc graduated glass tubes, 1/10 cc div.	Per half-dozen	3.12
506	25 cc plain glass tubes	Per dozen	2.60
507	15 cc round bottom plain glass tubes	Per dozen	1.30
		Per six dozen	4.88
508	15 cc narrow neck glass tubes	Per dozen	2.54
510	10 cc Hopkin's Vaccine tubes	Each	2.54
		Per half-dozen	7.15
511	Babcock test tubes for human milk	Each	.59
		Per half-dozen	3.25
515	50 cc plain lipped glass tubes	Per dozen	2.34
		Per six dozen	7.80
520	50 cc plain narrow neck glass tubes	Per dozen	2.34
		Per six dozen	7.80
525	50 cc graduated glass tubes, ½ cc div. to 10 cc, 1 cc to 50 cc	Per half-dozen	4.94
535	Hart Casein tubes	Per half-dozen	3.12
551	Shaw Separatory glass funnels for butter testing, about 75 cc	Each	3.12
552	250 cc glass prescription bottles	Per dozen	2.08
554	Squibb Separatory glass funnels, 150 cc	Each	3.12
558	250 cc glass sterilizer bottles	Per dozen	2.92
561	2 cc Board of Health glass tubes	Per 100	6.17
566	Rubber stoppers for Board of Health tubes	Per 100	2.34
568	Set of 20 Board of Health tubes and 40 stoppers	Per set	2.60
570	15 cc rubber cushions, Cornell style	Per dozen	1.17
571	50 cc rubber cushions, Cornell style	Per dozen	2.34
579	Rubber pads for Babcock trunnion cups, No. 362	Per dozen	.39
580	Rubber caps for tubes Nos. 502, 505 and 507	Per dozen	1.17
581	Rubber cushions for 250 cc bottles, No. 552	Each	.78
582	Rubber cushions for 250 cc bottles, No. 558	Each	.98
583	Rubber caps for 250 cc bottles No. 558	Per dozen	2.60
584	Molded soft rubber caps for glass tubes, No. 520	Per dozen	1.24
585	Square sputum bottles, with corks	Per dozen	.78
		Per gross	7.28
594	Rubber cushions for 6 oz. sterilizer nursing bottles	Each	.59
780	Cast-iron stand for mounting Size 1 Centrifuge	Each	14.30



11622

11620 **Centrifuges—Electric.** International Equipment Company's Combination Outfit, Size 1, Type A; consists of Size 7, Type A centrifuge, as described, with combination head No. 233; four 15 cc metal tubes and rubber cushions; Nos. 302 and 570; four 50 cc metal tubes, trunnion rings and rubber cushions, Nos. 320, 325 and 571; four Babcock trunnion cups and rubber pads Nos. 362 and 579; one dozen Babcock test milk bottles, No. 620; six dozen plain 15 cc glass tubes, No. 502; half-dozen graduated 15 cc glass tubes, No. 505; three dozen plain 50 cc glass tubes, No. 515; three dozen narrow neck 50 cc glass tubes, No. 520, with one-half dozen each rubber caps, Nos. 580 and 584.

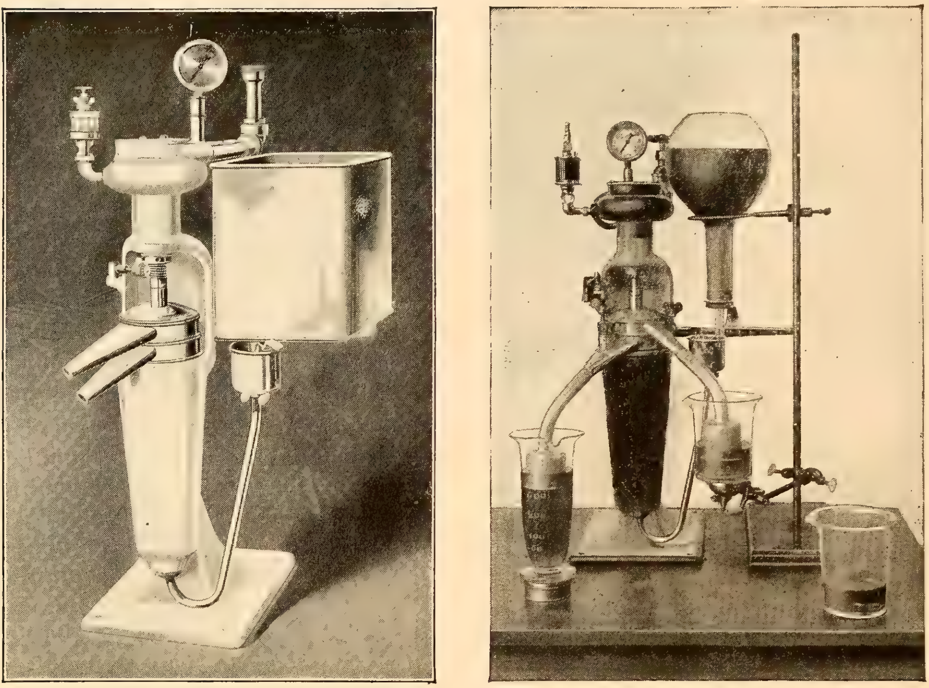
No.	A	B
Current	110 V., D. C.	220 V., D. C.
Each	**135.20**	**139.10**

No.	C	D
Current	110 V., A. C., 60 Cyc.	220 V., A. C., 60 Cyc.
Each	**139.10**	**143.00**

11622 **Centrifuges—Electric.** International Equipment Company's Combination Outfit, Size 1, Type B; same as No. 11620 outfit above, but with Size 1, Type B centrifuge No. 11611.

No.	A	B
Current	110 V., D. C.	220 V., D. C.
Each	**161.20**	**165.10**

No.	C	D
Current	110 V., A. C., 60 Cyc.	220 V., A. C., 60 Cyc.
Each	**178.10**	**178.10**



11625

11625 **Centrifuge—Sharples' Laboratory.** Steam turbine driven; designed specially for medical laboratories with particular reference as to feed so as to meet higher sterilization requirements; about 20 lbs. of steam are sufficient to turn the bowl 40,000 R.P.M., developing a centrifugal force more than 41,000 times as great as the force of gravity, a much greater force than can be generated in any other form of centrifugal apparatus; very useful for commercial laboratories, in the refining of oils and preparation of organic and inorganic compounds, the recovery of by-products, in many kinds of analytical work; also in bacteriological laboratories, for clarifying blood serum or gelatine, quickly and very nearly sterilizing liquids, etc.; consists of cast-iron frame with steel tube, or bowl, about 2 in. in diameter and 8 in. long, suspended vertically from a flexible, steel spindle, with simple ball bearing at top, the only bearing in the machine; bowl is rotated about its vertical axis by means of the small turbine wheel just above the ball bearing, its lower end being guided by a wooden bushing; height, 24 in.; weight, 55 lbs. ----------Each **160.00**

11626 **Centrifuge—Sharples' Laboratory.** Same as No. 11625 above, but driven by compressed air, 15 cubic feet per minute being required, at about 20 lbs. pressure ------------------------------------Each **160.00**

Your Laboratory Needs may require a Pressure Filter, rather than a Centrifuge. Write us about your problem. We may be able to assist you.

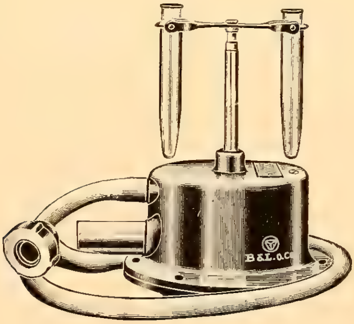
11625

11626 **Centrifuge—Electric Model—Bausch & Lomb.** Made to be attached to any lamp socket, provided with a five-stop rheostat to control the speed within a range of 750-2100 R. P. M.; furnished complete with rheostat for five speeds, two arm sedimentation attachment, two 15 cc tubes—one graduated and one ungraduated.

No. A	For 110 volt D. C.	Each	**50.00**
No. B	For 110 volt A. C.	Each	**60.00**
No. C	For 220 volt D. C.	Each	**56.00**

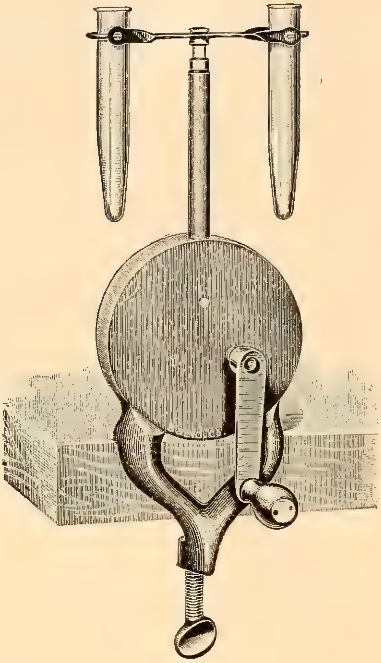
11627 **Centrifuge—Electric Model.** Same as above as shown in illustration, but provided with a covered guard which increases the speed by 70 to 100%, depending upon the load, as well as preventing spattering or danger to the operator.

No. A	For 110 volts D. C.	Each	**58.50**
No. B	For 110 volt A. C.	Each	**68.50**
No. C	For 220 volt D. C.	Each	**64.50**



11628

11628 **Centrifuge—Water Power—Bausch & Lomb.** Equipped with a motor which gives sufficient speed with ordinary water power for usual analyses, pressure of 45 lbs. per square inch giving 1650 revolutions per minute; fitted with glass bearing plate and a brass inlet and outlet to protect it against rusting; furnished complete with two-arm sedimentation attachment, 15 cc tubes, one graduated and one ungraduated ---------- Each **16.00**



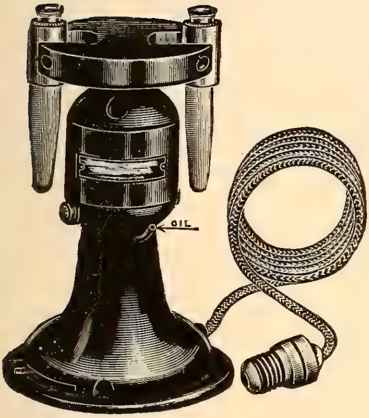
11629

11629 Centrifuge—Hand Model—Bausch & Lomb. Offered in two models the single speed and the two speed; the single speed giving 1200 R. P. M. with 50 turns of the handle, and the two speed giving 1200 for sedimentation and 4000 with the Haematokrit; gears and pinion are protected from dust; handle construction makes it impossible to stop so suddenly that the contents of the tube are spilled. Complete with two-arm sedimentation attachment, 15 cc tubes, one graduated and the other ungraduated.

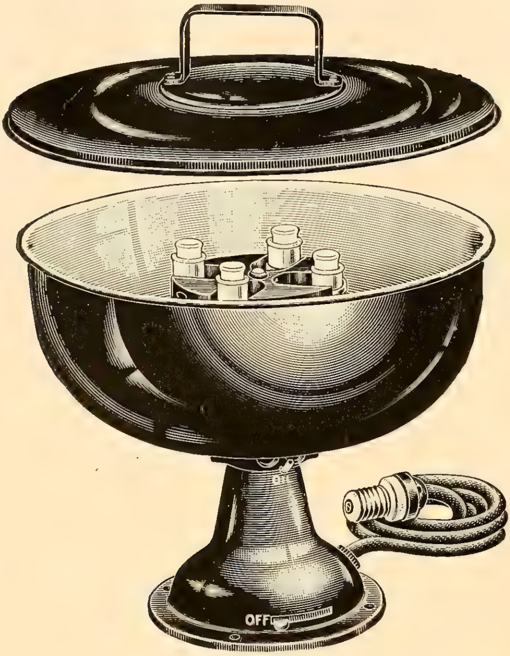
No. A	Single speed	Each	**12.50**
No. B	Two speed	Each	**16.50**

11631 Accessory equipment for centrifuges Nos. 11626, 11627, 11628 and 11629.

A	Four-arm sedimentation attachment with aluminum shields and 15 cc tubes, one graduated and three ungraduated	Each	**8.50**
B	Four-arm sedimentation attachment with aluminum shields and 50 cc tubes, one graduated and three ungraduated	Each	**16.00**
C	Two-arm sedimentation attachment with aluminum shields and 50 cc tubes, one graduated and one ungraduated	Each	**12.00**
D	Daland's Haematokrit	Each	**4.50**
E	Milk Tube, Graduated	Each	**.45**
F	Blood Tube, Graduated	Each	**1.00**
G	Pipette, 1 cc (volumetric)	Each	**.20**
H	Automatic Blood Pipette	Each	**1.25**
I	Sediment tube, graduated 15 cc	Each	**.45**
J	Sediment tube, graduated 50 cc	Each	**1.00**
K	Sediment tube, ungraduated 15 cc	Each	**.20**
L	Sediment tube, ungraduated 50 cc	Each	**.40**
M	Aluminum shield for 15 cc tube	Each	**.35**
N	Aluminum shield for 50 cc tube	Each	**.75**
O	Sputum tube, ungraduated	Each	**.35**



11635



11641

11635 **Centrifuge—Electric.** An unusually rigid and heavily built machine whose construction embraces several unique features that have proven very advantageous in practice. A rheostat is provided for gradually working up to maximum speed, thus eliminating the strain of starting torque. Speed, 1800 R. P. M. with two 15 cc tubes. The tube carrier is made into a heavy balance wheel to insure stability and fan blades mounted below prevent overheating of windings of motor. Ball bearings and complete with cord and plug. Height, 24 cm; rotating diameter, 29 cm. Maximum current consumption, ¾ ampere.

No. A	For 110 volts A. C. or D. C.	Each	32.50
No. B	For 220 volts A. C. or D. C.	Each	37.50

(Please state voltage and current when ordering.)

11637 **Centrifuge—Electric.** Same as No. 11635 above, but equipped with dome protector.

No. A	For 110 volts A. C. or D. C.	Each	42.50
No. B	For 220 volts A. C. or D. C.	Each	47.50

(Please state voltage and current when ordering.)

11639 **Centrifuge—Electric.** Same construction as No. 11635 above, but tube carrier is provided for four 15 cc tubes.

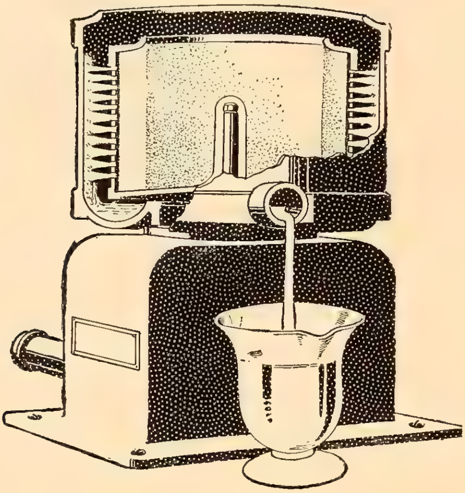
No. A	For 110 volts A. C. or D. C.	Each	35.00
No. B	For 220 volts A. C. or D. C.	Each	40.00

(Please state voltage and current when ordering.)

11641 **Centrifuge—Electric.** Same as No. 11639 above, but provided with dome protector.

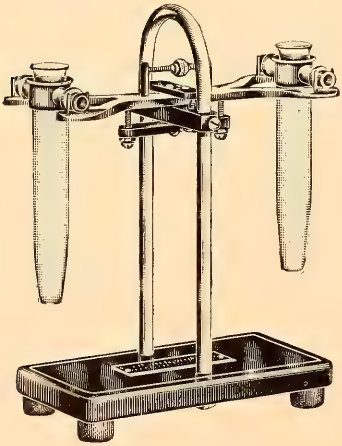
No. A	For 110 volts A. C. or D. C.	Each	45.00
No. B	For 220 volts A. C. or D. C.	Each	50.00

(Please state voltage and current when ordering.)



11645

11645 **Centrifuge—Hand—Basket Type.** Designed especially for use in laboratories where an efficient instrument is required for centrifugal filtration. Substantially constructed; basket, 114 mm diameter, is of solid brass and will carry load of about one pound; speed may be brought up to 10,000 revolutions per minute ;gears, enclosed in the base protected against dust, are cut with greatest accuracy to insure easy running ____Each 95.00

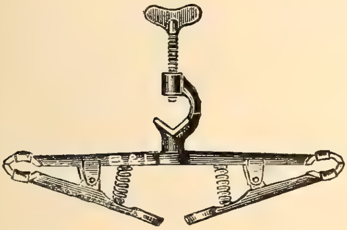


11655

11660

11655 **Centrifuge Tube Balance.** Valuable accessory for anyone using a centrifuge, as it is important for each pair of centrifuge tubes to balance, a difference in their weight causing the centrifuge bearings to wear unevenly; mounted on enameled, iron base standing on rubber feet and finished in nickel and black lacquer; designed to hold 15 cc standard tubes and 50 cc International tubes; complete, with two aluminum tubes and two 15 cc, plain glass tubes______________Each 18.00

11660 **Revolution Counter.** Of convenience in determining speed of revolution; substantial in construction and moderate in price; provided with an extension spindle to reach the shafts of Centrifuges Nos. 11610 and 11611 through the covers when closed______________Each 1.95



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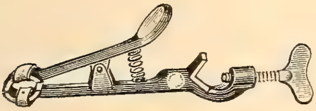

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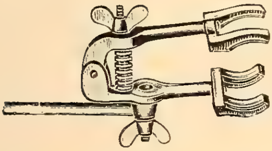

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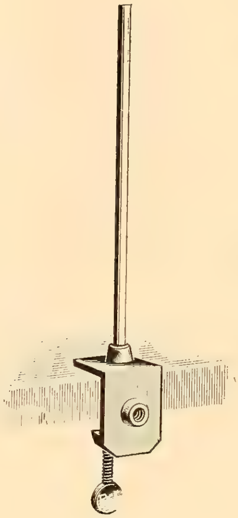

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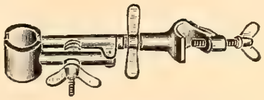

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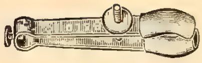

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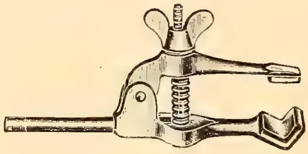


11706

11665 **Clamp—Universal Apparatus.** For holding rods in vertical or horizontal position Each .60

11670 **Clamps—Universal Apparatus.** For condensers, etc.; provided with swivel jaws, adapting themselves to irregular shapes.

Size	No. A. Small	B Medium	C Large
Each	.50	.55	.65

11675 **Clamps—Universal Apparatus.** Same as No. 11670 above, but rubber covered.

Size	No. A. Small	B Medium	C Large
Each	.55	.60	.70

11680 **Clamp—Burette.** For one burette Each .40

11682 **Clamp—Burette.** Same as No. 11680 above, but rubber covered Each .45

11687 **Clamp—Burette.** Double, for two burettes Each .45

11689 **Clamp—Burette.** Same as No. 11687 above, but with jaws rubber-covered Each .55

11694 **Clamp—Burette.** Of stamped steel; adjustable by check-nut to any angle; an excellent clamp for general use Each .30

11696 **Clamp—Burette.** Same as No. 11694 above, but with jaws rubber-covered Each .35

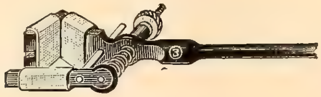
11701 **Clamp—Burette.** Nickeled; with rubber-covered jaws and screw for attachment to apparatus stand Each .70

11706 **Clamps—Burette.**

Size	No. A Small	B Large	C Extra Large
Each	.40	.50	.80

11708 **Clamps—Burette.** Same as No. 11706 above, but with jaws rubber-covered.

Size	No. A Small	B Large	C Extra Large
Each	.45	.55	.85



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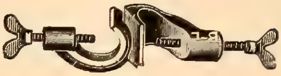

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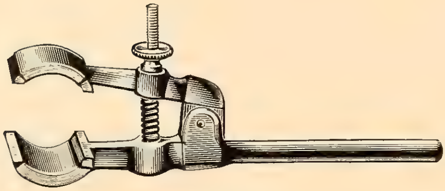

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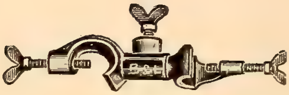

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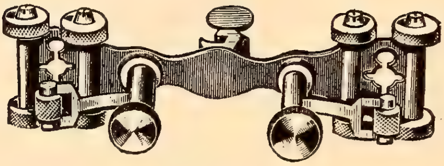


11725

11710 **Clamp—Hoffmann's.** With opening of 1 in.; length, 9 in.; diameter, ⅜ in. ---------- Each .45

11712 **Clamp—Hoffmann's.** Same as No. 11710, but with jaws rubber-covered ---------- Each .50

11714 **Clamps—Burette.** For holding burettes or tubes at any angle.

No.	A	B	C
Size	Small	Medium	Large
Each	.30	.40	.60

11716 **Clamps—Burette.** Same as No. 11714 above, but with jaws rubber-covered.

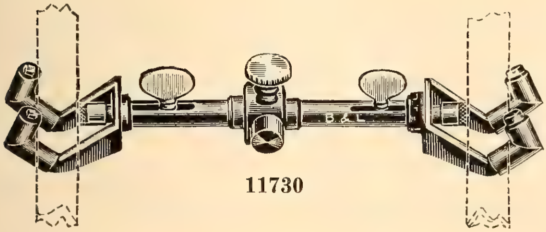
No.	A	B	C
Size	Small	Medium	Large
Each	.35	.45	.65

11718 **Clamp Holders.** For attaching clamps, extension rings, ring burners, etc., to apparatus support.

No.	A	B
Size	Small	Large
Each	.25	.35
Per dozen	2.50	3.50

11720 **Clamp Holder—Universal.** To set at any angle ---------- Each .45

11725 **Clamp—Burette.** With rubber rings; closes automatically; double form ---------- Each 4.00



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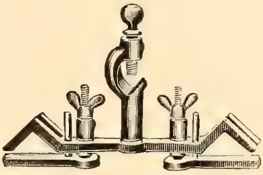

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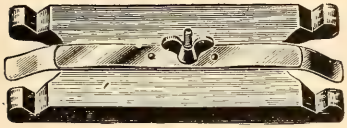

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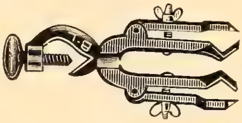
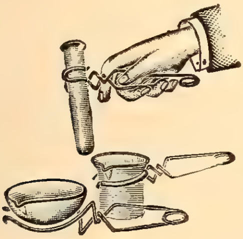


11750

11730	**Clamp—Burette, Allihn's Automatic.** For two burettes	Each	3.00
11735	**Clamp—Burette, Hoffmann's.** For two burettes	Each	.60
11740	**Clamp—Burette, Hoffmann's.** Same as No. 11735 above, but with jaws rubber-covered	Each	.70
11745	**Clamp—Burette, Lincoln's.** Double; holds burettes perpendicular and perfectly rigid; will fit any rod up to ½ in. in diameter	Each	.90
11750	**Clamp—Burette, Lunge's.** For supporting two tubes parallel	Each	2.50



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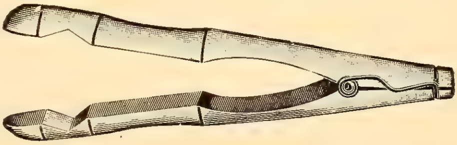

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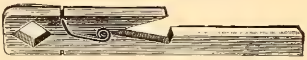


11785

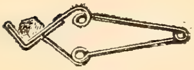
11765 **Clamps—Chaddock's.** Made of spring wire, japanned; with rubber-covered jaws for beakers.

Size	No. A Small	B Large
Each	.35	.35

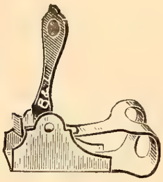
11770 **Clamps—Chaddock's.** For dishes.

Size	No. A Small	B Medium	C Large
Each	.30	.35	.40

11775	**Clamp—Chaddock's.** For flasks or test tubes; with rubber-covered jaws	Each	.35
11780	**Clamp—Flask.** For holding flasks or large tubes; of wood, with spring	Each	.80
11785	**Clamp—Test Tube.** Of wood, with spring	Each	.25



11790



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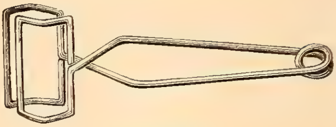

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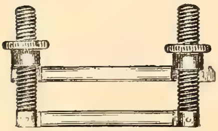

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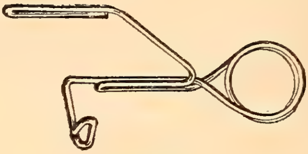

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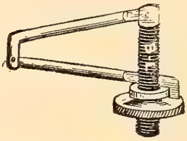

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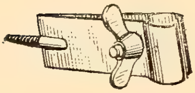


11805

11790 **Clamp—Brass, Bunsen's.** For small test tubes ---------------- Each .55
Per dozen 6.00

11795 **Clamps—Test Tube, Stoddard's.** Of brass.

No.	A	B
Size	Small	Large
Each	.20	.25
Per dozen	2.00	2.50

11800 **Clamps—Test Tube, Stoddard's.** Of nickeled spring wire.

No.	A	B
Size	Small	Large
Each	.15	.18
Per dozen	1.40	1.80

11805 **Clamp—Tube.** Of brass, nickel-plated; designed for screwing into wall to hold tubes, burettes, etc ------------------------------ Each .50
Per dozen 5.40

11810 **Clamps—Tubing, Chaddock's Pinch Cocks.** Made of one piece of brass spring wire, no solder; furnished with a clamp for rubber tubing that can be put on and off the tubing from the side, which allows the tubing to open fully; finished in nickel.

No.	A	B	C	D
Size	Small	Medium	Large	Extra Large
Each	.20	.25	.30	.60
Per dozen	2.00	2.40	3.00	6.00

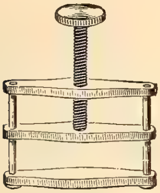
11815 **Clamps—Tubing.** Nickel-plated; for rubber tubing.

No.	A	B
Size of opening, mm	5	8
Each	.05	.10
Per dozen	.50	1.00

11820 **Clamp—Tubing, Bunsen's.** For rubber tubing; made of brass, nickel-plated; size, 18 x 38 mm ------------------------------------ Each .45
Per dozen 4.80

11822 **Clamps—Tubing.** (Lever Screw Compressor.) For rubber tubing; nickel-plated.

No.	A	B
Size	Small	Large
Each	.25	.40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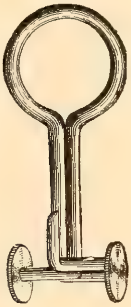
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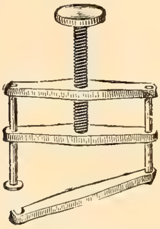
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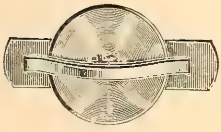
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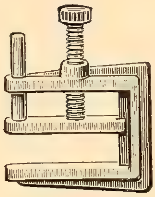
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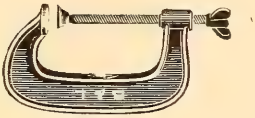
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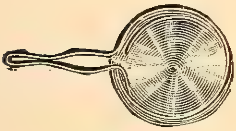

11850

11825 **Clamps—Tubing, Hoffmann's.** For rubber tubing; nickel-plated.

No.	A	B
Size	Small	Large
Each	.25	.30
Per dozen	2.40	2.70

11830 **Clamps—Tubing, Hoffmann's.** Improved form; can be attached to tubing without disconnecting apparatus.

No.	A	B
Size	Small	Large
Each	.25	.30
Per dozen	2.50	2.80

11835 **Clamps—Tubing, Hoffmann's.** Improved form; can be attached to tubing without disconnecting apparatus.

No.	A	B
Size	Small	Large
Each	.25	.30
Per dozen	2.40	2.80

11840 **Clamps—Tubing, Mohr's Pinch Cock.** Of spring wire.

No.	A	B	C	D
Size	Small	Medium	Large	Extra Large
Each	.13	.15	.18	.30
Per dozen	1.35	1.50	1.90	3.20

11845 **Clamps—Watch Glass.** Of brass, nickel-plated; without watch glasses.

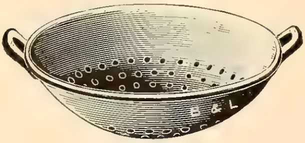
No.	A	B
Size	Small	Large
Each	.25	.30
Per dozen	2.60	2.90

11850 **Clamps—Watch Glass, Bunsen's.** Without watch glasses.

No.	A	B
Diameter, mm	50	65
Each	.30	.35
Per dozen	2.90	3.25

11855 **Clamps.** Of iron; for fastening apparatus to table.

No.	A	B	C	D	E	F	G
Size, mm	50	75	100	125	150	175	200
Each	.50	.60	.75	.90	1.20	1.35	1.80
Per dozen	5.00	5.80	7.50	9.00	12.00	14.00	18.00



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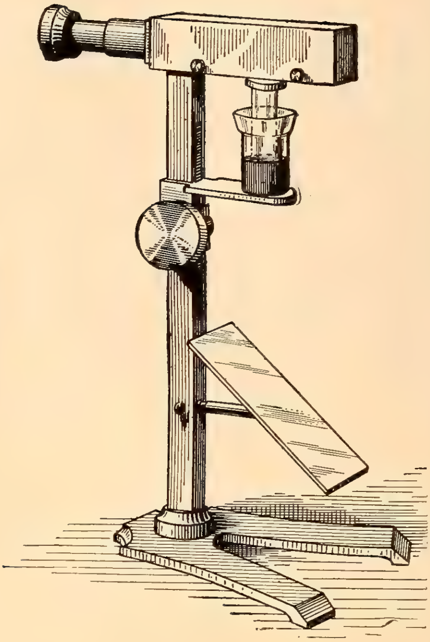

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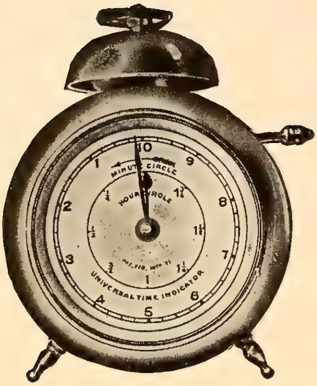

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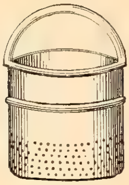


11870

11860 **Clock—Interval.** For indicating time intervals; is an accurate and reliable time watcher ---------- Each 4.75

11865 **Colanders.** Of porcelain; with two handles.

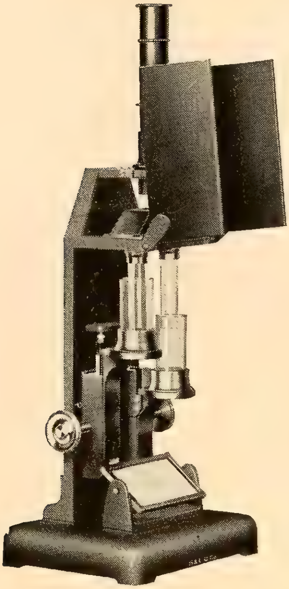
No.	A	B	C	D
Diameter, mm	140	170	200	235
Each	**1.00**	**1.50**	**2.00**	**2.50**

11870 **Colander.** Of porcelain; with handle; diameter, 160 mm; height, not including handle, 150 mm ---------- Each 3.00

11875 **Colorimeter—Bock-Benedict.** Designed by Dr. Joseph C. Bock and Dr. Stanley R. Benedict, of the Department of Chemistry, Cornell University Medical College, New York City, and described in the "Journal of Biological Chemistry," August, 1918; simple in construction and highly accurate, an ideal instrument for laboratory worker and clinician as well as student; very thin mirrors, approximating first-surface mirrors but more practicable, are employed instead of the more costly prisms; instrument is consequently moderately priced, but compares favorably with more expensive colorimeters; mirrors are so arranged as to give a perfect, flat, "side-by-side" field; furnished complete with plunger, cup for the unknown and one cell for the standard (either 8 x 10 or 15 x 20 mm, as specified) ---------- Each 35.00

Extra Parts:

Plungers	Each	1.00
Cups	Each	1.00
Cells, 8 x 10 mm	Each	2.00
Cells, 15 x 20 mm	Each	2.00



11880

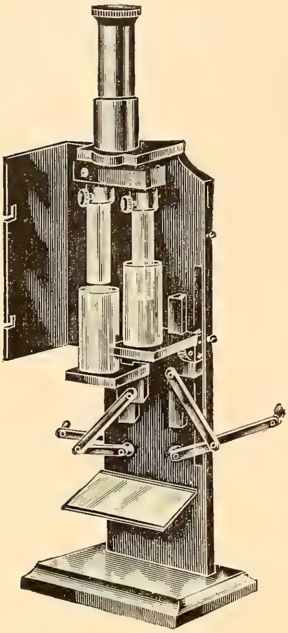
11880 **Colorimeter—Dubosq, Bausch & Lomb.** An apparatus to measure color intensity of liquids by transmitted light and intensity of solids by reflection at different angles of incidence; consists of heavy base and firm standard, assuring great stability and durability; base carries double reflector, one side silvered and the other opal, to give diffused illumination; standard carries on vertical surface two rack and pinion adjustments of regular microscope type for movement of cup or cylinder supports; pinion and operating heads are always in fixed location, so that readings are controlled only by observation and not by location of pinion heads; cups or cylinders have plano-parallel glass bottoms and are removable for easy cleaning; plungers, prisms and compound magnifier are attached to a bracket on upper part of standard; plungers are of selected optical glass, accurately ground and polished; prisms are of precise optical quality with fine central dividing line; compound magnifier is of four lens construction, adjustable for focusing; cover on front of instrument excludes all light from the cylinders except that reflected by illuminating mirror; sclaes on rear surface of standard are graduated in millimeters and provided with vernier readings to 1/10 mm; rack stops prevent cylinder and plunger from forcible contact; supplied with series of colored glasses for modifying light from either or both cylinders; furnished in wood case; tubes and scales 50 mm long----Each **110.00**

11885 **Colorimeter—Dubosq, Bausch & Lomb.** Similar to No. 11880 above, but with tubes and scales 100 mm long------------------------Each **135.00**

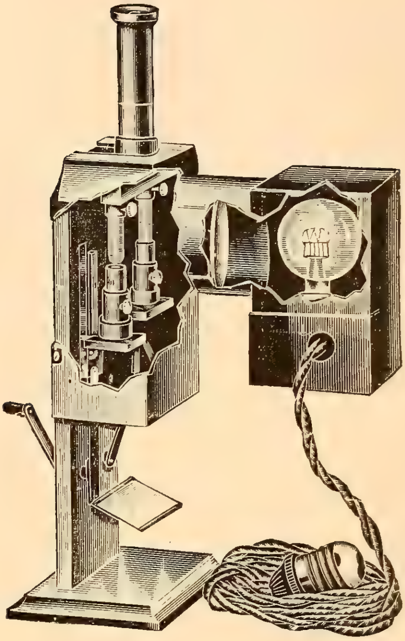
Nephelometer. For use with above colorimeter; description and prices on request.

Haemaglobin Filters—Newcomer. For use with above colorimeter; description and prices on request.

Colorimeter Electric Lamp. Especially adapted to use with above colorimeter; description and prices on request.

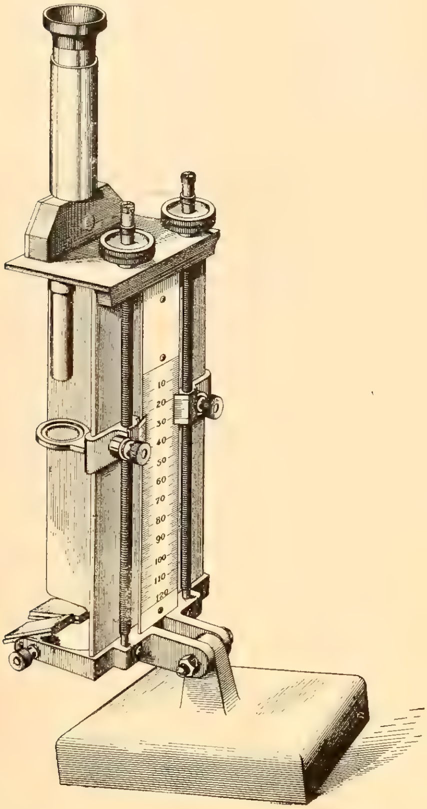


11890



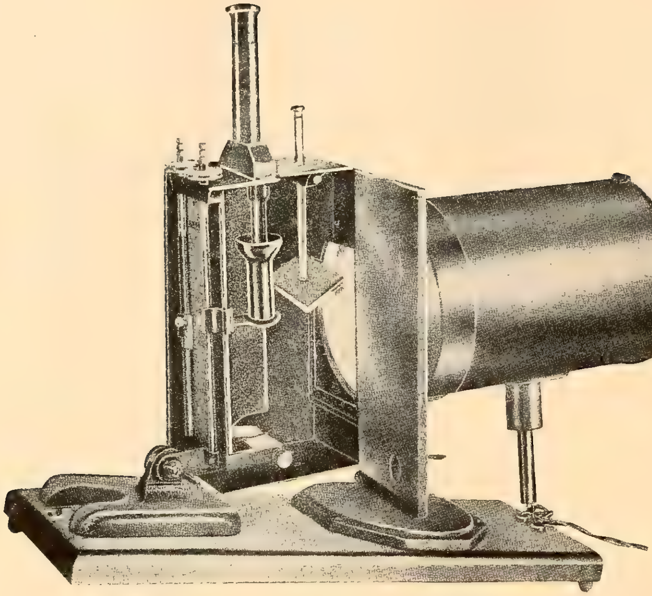
11901

11890	**Colorimeter—Simplified, Dubosq Pattern (patent applied for).** Extremely compact and small, permitting it to be carried easily; housing, below eyepiece, carries prism system which receives rays of light or images, respectively, emerging from both solution cups, through plungers, combining them into one field, thus presenting to the eye two areas in contact, illuminated by same source of light that traverses columns of liquids to be compared; glass cylinders are large enough for all varieties of determination; glass plungers are proportionate in size to the cylinders; upright plate is supplied with metric scale of 5 cm length, subdivided into millimeters, while a sliding vernier permits a reading of fraction of 1/10 mm or per cent, respectively; furnished complete with two glass cylinders and two glass plungers -- Each	60.00
11895	**Glass Cylinder.** For use with No. 11890 colorimeter above -------- Each	1.50
11898	**Glass Plunger.** For use with No. 11890 above ------------------ Each	2.00
11901	**Nephelometer Attachment.** For use with colormeter No. 11890; arranged according to method suggested by Dr. W. R. Bloor, Harvard Medical School; outfit consists of two Nephelometer plungers, two metal sockets for plungers, two glass Nephelometer cups with screw sockets to hold them, one illuminator with lamp and condensor in light-proof housing and fittings to attach to colorimeter and one curtain to prevent the entering of light from rear of instrument; attachment is furnished complete ------------------------------ Each	40.00



11907

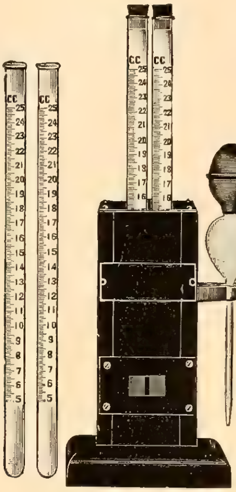
11907 **Colorimeter—Kober's.** A combination instrument for convenience of the analyst who may desire to use both colorimetry and nephelometry; designed by Philip Adolph Kober, of the Division of Laboratories and Research, New York State Department of Health, as described in the "Journal of Biological Chemistry," March, 1917; cups containing the solutions are entirely separated from each other by dividing wall, thus eliminating the spattering of solutions from one cup into the other; extra heavy base keeps instrument in steady position; the movable verniers can be set at "zero" by simply loosening a thumb screw; the large brass scale is silvered to show the graduation more distinctly; prisms are attached to a separate plate for easy removal and cleaning; the mirror reflectors work independently of each other, and the reflected light can be so adjusted as to insure an absolutely even field; the dividing line in the "side-by-side" field is made as thin as possible to secure accurate readings; all plungers and cups have bottoms fused on to eliminate cement troubles permanently and will resist all acids, alkalis and heat; the stages travel on screw-threaded rods, which excels the old style rack and pinion method by eliminating lost motion and consequent inaccuracy; by attaching the instrument to a lighting source, as shown in Figure 2, it can be changed instantly into a nephelometer, as the plungers are made of black glass tubing; the instrument is American-made throughout, and all parts are made to be interchangeable, subject to replacement at short notice; furnished with one pair of colorimetric or nephelometric cups and plungers____Each **69.00**



11912

11912	**Colorimeter—Nephelometer, Kober's.** Same as described under No. 11907 above, but furnished with lamp house, as shown in illustration; one pair of short and one pair of long colorimetric cups, one pair of short and one pair of long nephelometric cups, stereopticon lamp, cord and plug, mounted on a black, polished board with switch	Each	120.00
	Accessory Parts:		
	Colorimeter Cups made from:		
11915	Black tubing and blue bottoms for use with artificial light; blue bottoms act as color screens and give daylight effect to light beams; black glass wall of cup shuts out all interfering outside light; long or short	Per pair	5.00
11919	Black tubing and white bottoms for use with daylight; black glass walls of cups shut out all interfering outside light, thus giving highest accuracy; long or short	Per pair	4.50
11923	White tubing with blue bottoms for use with artificial light; white glass walls are advantageous when operator finds it necessary to watch solution, the blue bottoms giving the daylight effect; long or short	Per pair	4.00
11927	White tubing with white bottoms for use with daylight or artificial light; used for solutions that require no screening; long or short	Per pair	3.50
11931	**Nephelometric Cups** made from: White tubing and black bottoms for nephelometric work only; long or short	Per pair	4.50
	(Full directions for setting up up and use given with each instrument or sent upon request.)		
11936	Plungers	Per pair	4.50
11940	Concentrated filament lamp	Each	1.75
11943	Zero gauge	Each	.60
11946	The lamphouse is wired for 110 volts. For 220 volts or any other voltage a special resistance unit is furnished at extra charge of		3.50

11955



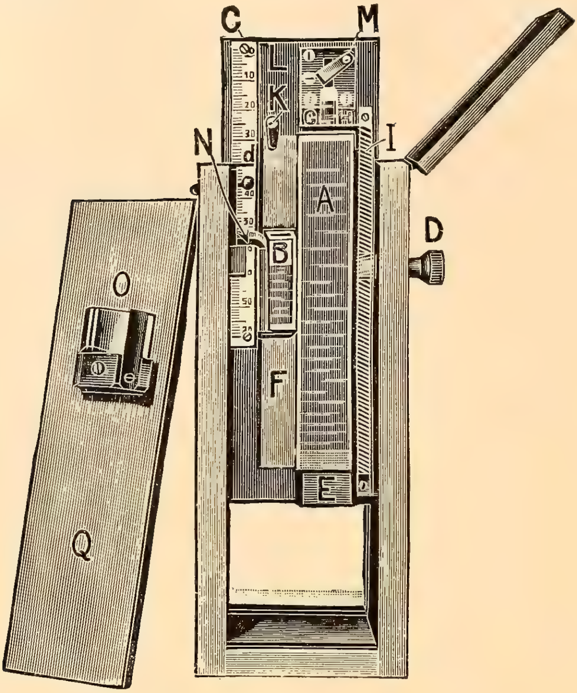
11950

11950	**Colorimeter—Myers'.** After the suggestion of Professor V. C. Myers, of the New York Post-Graduate Medical School and designed to meet the need for a simple, relatively accurate but inexpensive colorimeter for clinical purposes; with it one may make such estimations as the excretion of phenolsulphonephthalein in the urine and the uric acid, urea, creatinine and sugar in the blood, etc., with sufficient accuracy for any clinical purpose; may also be used to determine individual nitrogeneous constituents of the urine, although in the case of a nitrogen partition it is probably best to employ the older macro-methods; consists of a box containing two tubes of the same bore (1.2 x 26 cm) graduated from 5 to 25 cc; tubes are placed side by side, colorimetric comparison being made in the ungraduated portion (0.5 cc) through an opening, 1 x 2.2 cm, against a white, glass background; furnished complete, including housing, filling pipette with rubber bulb, holder for pipette and two graduated tubes, each 25 cc, in cardboard box	Each	10.00
11953	**Extra:** Graduated tubes, each 25 cc	Per pair	4.00
11955	**Colorimeter—Myers.** A moderately priced instrument for clinical purposes; contains two tubes of identical bore, graduated in tenths from 5 to 25 cc, which are placed side by side, colorimetric comparison being made in ungraduated portion through opening against white glass background; gives very accurate results; holder is of nickeled brass, with black lacquer finish; tubes are held firmly and in proper position for matching colors	Each	12.00
11958	**Extra Tubes.** For No. 11955 above	Each	1.60

BIOLOID

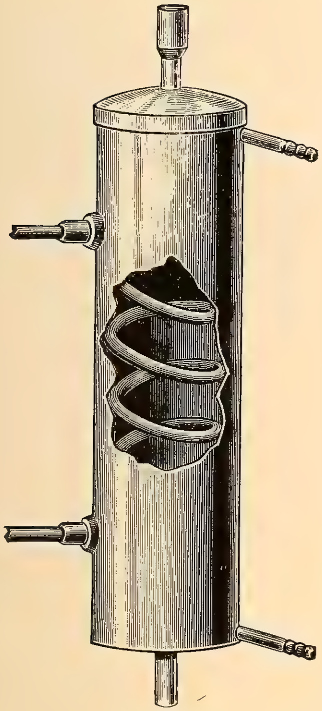
BIOLOID BLOOD REAGENTS

Prepared for the latest methods of bio-chemical analysis.



11962

11962	**Colorimeter—Universal, Autenrieth and Koenigsberger.** Gives accurate and quick results; box is of wood, with removable front and back walls; wedge to take standard solution is of hollow glass; trough to receive the liquid to be tested is also of glass; double plate prisms, held in place by two spring clips, are mounted on back of observation window in front slider and are easily released for cleaning; an opening in the back slider is fitted with ground glass plate, held in position by catch; furnished complete, including one wedge and trough	Each	52.00
11964	**Colorimeter—Universal, Autenrieth and Koenigsberger.** Same as No. 11962 above, but furnished without wedge and trough	Each	40.00
11967	**Wedge.** Empty; with ground glass; furnished without case	Each	8.00
11970	**Trough.** As described above	Each	4.00
11973	**Pipette.** Graduated; 20 cmm	Each	1.50
11976	**Case.** Velvet lined; for No. 11962	Each	5.00
11979	**Case.** Velvet lined; to accommodate three wedges and one trough	Each	4.00
11982	**Case.** Velvet lined; to accommodate six wedges and one trough	Each	5.00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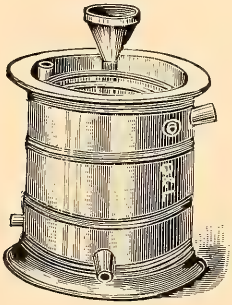
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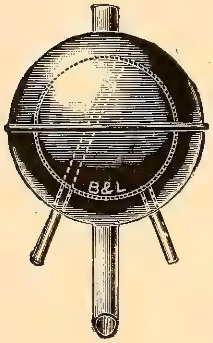
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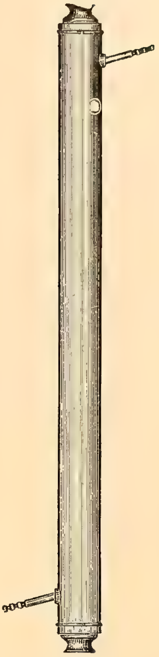

12000

11985 **Condenser—Hallock's.** Of copper, with pure block-tin condensing worm; provided with two rods for support; size 365 x 100 mm__Each 8.00

11990 **Condensers.** Of zinc; with heavy, block-tin worm.

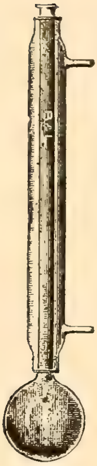
No.	A	B	C	D	E
Capacity of stills, liters	2	4	8	12	20
Each	6.00	7.50	9.75	12.00	15.00

11995 **Condenser—Soxhlet's.** Globe shape; of copper, tinned inside______Each 3.75

12000 **Condensers—Liebig's.** Of brass, highly polished; diameter, 1⅞ in.

No.	A	B	C	D	E	F	G
Length, mm	300	375	500	600	675	750	1000
Each	3.15	3.60	4.00	4.50	5.00	5.40	6.75

Owing to the existing prohibition laws a certain procedure is necessary in order to obtain Stills which may be used for alcoholic distillations. See your local Internal Revenue Representative.



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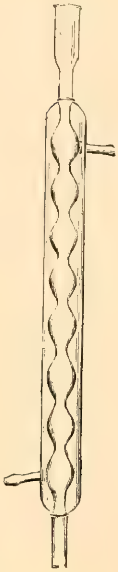

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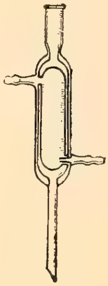

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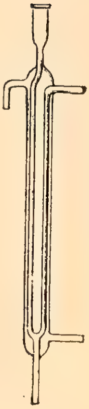

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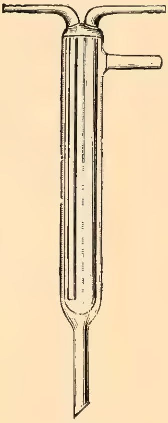

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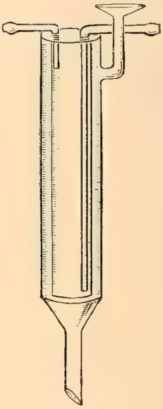


2230

2205 **Condenser.** Of glass; with receiver of 300 cc capacity blown on; length, 400 mm --Each 2.00

2210 **Condensers—Allihn's.** Of glass; with bulb condensing tube.

No.	A	B	C	D	E	F	G
Length of Jacket, mm	200	250	300	400	450	500	600
Each	**1.75**	**1.90**	**2.10**	**2.40**	**2.80**	**3.20**	**3.60**

2215 **Condensers—Davies' Improved.** A double surface condenser; outflowing warm water does not heat inflowing water.

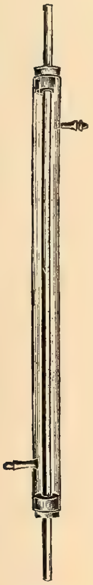
No.	A	B	C
Length of Jacket, mm	150	200	300
Each	**5.50**	**6.25**	**7.50**

2220 **Condensers—Goeckel's.** Used for distillation of inflammable substances, where dangerous gases must be let off from the inside.

No.	A	B
Length of Jacket, mm	450	600
Each	**4.50**	**5.40**

2225 **Condenser—Hopkins.** Of glass; consists of thin glass, water tube, 25 mm outside diameter and 250 mm long, provided with inlet and outlet tubes, the former reaching to near the bottom of water tube, which is sealed into a stronger, outer tube, having side neck and its lower end ground to point; in use outer tube is not cooled to a temperature at which atmospheric moisture will condense upon it, wherein lies the chief advantage of this condenser over ordinary forms in fat extraction with anhydrous ether; may also be used for ordinary distillation by passing vapor through side tube; total length, 350 mm------Each **2.25**

2230 **Condenser—Hopkins (Picard-Law Modification).** Side tube bent upright at right angles, with funnel top so that the extraction fluid may be poured into the condenser without disconnecting the extraction tube when used in connection with extractor ----------------Each **2.50**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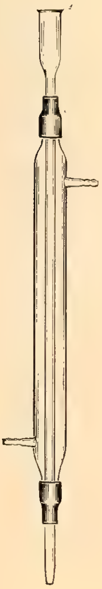
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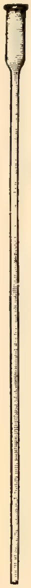
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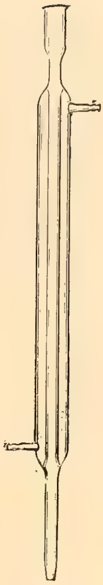
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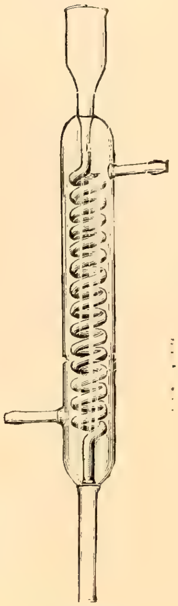

2255

2235 **Condensers—Liebig's.** Of glass; with loose inner tube; fitted with rubber stoppers.

No.	A	B	C	D	E	F
Length of Jacket, mm	300	400	500	600	800	1000
Each	1.50	1.65	1.90	2.50	3.25	4.50

2240 **Condensers—Liebig's.** Of glass; with loose inner tube and rubber connections.

No.	A	B	C	D	E	F	G	H
Length of Jacket, mm	250	300	400	450	500	600	800	1000
Each	1.30	1.50	1.65	1.75	1.90	2.50	3.25	4.50

2245 **Condenser Tubes.** Of glass; with adapter for condensers Nos. 2235 and 2240.

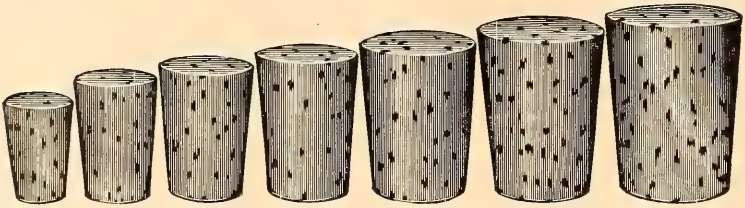
No.	A	B	C	D	E	F	G	H	I
Length of Jacket, mm	200	250	300	400	450	500	600	800	1000
Each	.25	.25	.28	.30	.33	.35	.50	.65	.85

2250 **Condensers—Liebig's.** Of glass; with inner tube sealed to body.

No.	A	B	C	D	E	F	G	H
Length of Jacket, mm	250	300	400	450	500	600	800	1000
Each	1.30	1.60	1.90	2.20	2.50	3.00	4.20	5.00

2255 **Condensers—Liebig's (Graham's).** Of glass; with condensing tube in form of coil sealed in water jacket.

No.	A	B	C	D	E	F	G	H
Length of Jacket, mm	150	200	250	300	400	450	500	600
Each	2.00	2.50	2.70	3.40	4.50	5.25	6.00	7.50



12010 Corks—Regular Length, XX Quality.

Numbers	00	0	1	2	3	4	5	6
Diameter, top, mm	8	9	10	11	12	14	16	18
Per gross	.27	.27	.27	.30	.36	.42	.46	.50

Numbers	7	8	9	10	11	12	13	14
Diameter, top, mm	20	22	24	26	28	29	30	31
Per gross	.57	.68	.84	.92	1.00	1.10	1.20	1.40

Numbers	15	16	17	18	20	22	24	26
Diameter, top, mm	32	34	36	38	40	43	46	50
Per gross	1.60	1.90	2.00	2.25	2.70	3.20	4.00	4.80

12012 Numbers 1 to 6, assorted________________________________Per gross .40

12013 Corks—Regular Length, XXX Quality.

Numbers	00	0	1	2	3	4	5
Diameter, top, mm	8	9	10	11	12	14	16
Per gross	.40	.40	.40	.45	.55	.60	.70

Numbers	6	7	8	9	10	11	12
Diameter, top, mm	18	20	22	24	26	28	29
Per gross	.75	.85	1.15	1.45	1.60	1.75	1.90

Numbers	13	14	15	16	17	18	20
Diameter, top, mm	30	31	32	34	36	38	40
Per gross	2.10	2.40	2.80	3.50	3.75	4.00	.480

12015 Number 1-6, assorted ____________________________________Per gross .55

12016 Corks—Regular Length, XXXX Quality.

Numbers	00	0	1	2	3	4	5
Diameter, top, mm	8	9	10	11	12	14	16
Per gross	.42	.42	.42	.50	.60	.70	.80

Numbers	6	7	8	9	10	11	12
Diameter, top, mm	18	20	22	24	26	28	29
Per gross	.90	1.10	1.40	1.70	2.00	2.10	2.30

Numbers	13	14	15	16	17	18	20
Diameter, top, mm	30	31	32	34	36	38	40
Per gross	2.55	3.00	3.40	4.20	4.50	4.80	5.60

12019 Corks—Short Form, XX Quality.

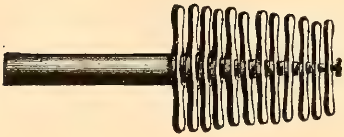
Numbers	00	0	1	2	3	4	5	6
Diameter, top, mm	8	9	10	11	12	14	16	18
Per gross	.26	.26	.26	.27	.32	.35	.40	.42

Numbers	7	8	9	10	11	12	13	14
Diameter, top, mm	20	22	24	26	28	29	30	31
Per gross	.50	.60	.70	.80	.90	.95	1.00	1.20

Numbers	15	16	17	18	20	22	24	26
Diameter, top, mm	32	34	36	38	40	43	46	50
Per gross	1.35	1.50	1.65	1.75	2.10	2.50	3.00	3.60

12021 Nos. 1 to 6, assorted__________________________________Per gross .35

12040



12045

12022 **Corks—Short Form, XXX Quality.**

Numbers	00	0	1	2	3	4	5
Diameter, top, mm	8	9	10	11	12	14	16
Per gross	.38	.38	.38	.40	.45	.50	.60

Numbers	6	7	8	9	10	11	12
Diameter, top, mm	18	20	22	24	26	28	29
Per gross	.65	.75	.95	1.10	1.40	1.50	1.60

Numbers	13	14	15	16	17	18	20
Diameter, top, mm	30	31	32	34	36	38	40
Per gross	1.80	2.00	2.40	2.60	2.80	3.00	3.50

Nos. 1 to 6, assorted ----------------------------------Per gross .45

12025 **Corks—Short Form, XXXX Quality.**

Numbers	00	0	1	2	3	4	5
Diameter, top, mm	8	9	10	11	12	14	16
Per gross	.40	.40	.40	.45	.50	.55	.70

Numbers	6	7	8	9	10	11	12
Diameter, top, mm	18	20	22	24	26	28	29
Per gross	.75	.90	1.10	1.25	1.60	1.75	1.90

Numbers	13	14	15	16	17	18	20
Diameter, top, mm	30	31	32	34	36	38	40
Per gross	2.10	2.50	2.80	3.00	3.20	3.50	4.00

12030 **Corks—Flat, XX Quality,** ⅝″ long, for wide mouth bottles, jars, etc.

No.	A	B	C	D	E	F	G	H	I
Diameter, top, mm	50	53	56	59	62	65	68	71	75
Per dozen	.33	.38	.42	.48	.54	.62	.70	.80	.90

No.	J	K	L	M	N	O	P	Q
Diameter, top, mm	81	87	93	100	112	125	138	150
Per dozen	1.10	1.40	1.65	1.95	2.60	3.30	4.20	5.20

12033 **Corks—Flat, XXX Quality,** ⅝″ long for wide mouth bottles, jars, etc.

No.	A	B	C	D	E	F	G	H	I
Diameter, top, mm	50	53	56	59	62	65	68	71	75
Per dozen	.60	.65	.75	.85	1.00	1.10	1.25	1.40	1.55

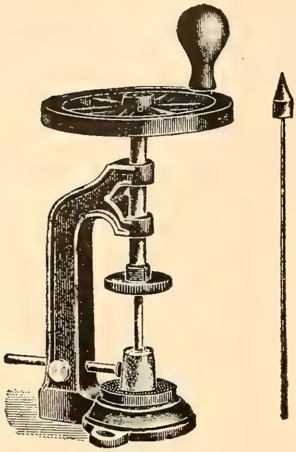
No.	J	K	L	M	N	O	P	Q
Diameter, top, mm	81	87	93	100	112	125	138	150
Per dozen	2.00	2.40	2.90	3.30	4.50	5.80	7.50	9.00

12040 **Cork Borers.** Of hard brass.

No.	A	B	C	D	E
Number in each set	3	6	9	12	15
Per set	.60	1.20	2.10	3.00	4.20

12045 **Cork Borers.** Of polished, hard brass, best make; with handle to each borer.

No.	A	B	C	D	E
Number in each set	3	6	8	12	15
Sizes	1–3	1–6	1–8	1–12	1–15
Per set	.70	1.40	2.50	3.20	4.20



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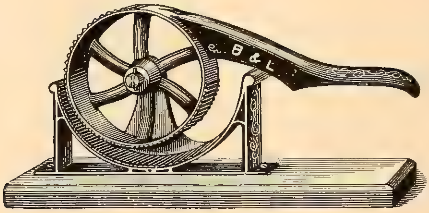

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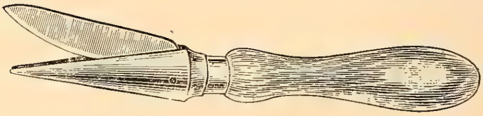


12055

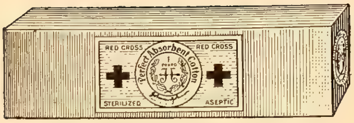
12050 **Cork Boring Machine.** Improved model for boring holes of any size in corks and rubber stoppers; has special device, not shown in illustration, for holding borers, so that their misplacement or loss is avoided; furnished complete with set of eight borers..................Each 14.50

12053 **Extra Borers** ....Per set 4.00

12055 **Cork Borer Sharpener.** Consists of a steel cone with knife......Each 1.80

12065 **Cork Press—Rotary.** Rolls the corks into desired tapering shape without splitting them; supplied in two sizes for corks up to 18 and 32 mm diameter, respectively.

No.	A	B
Size	Small	Large
Each	1.10	1.50



12070

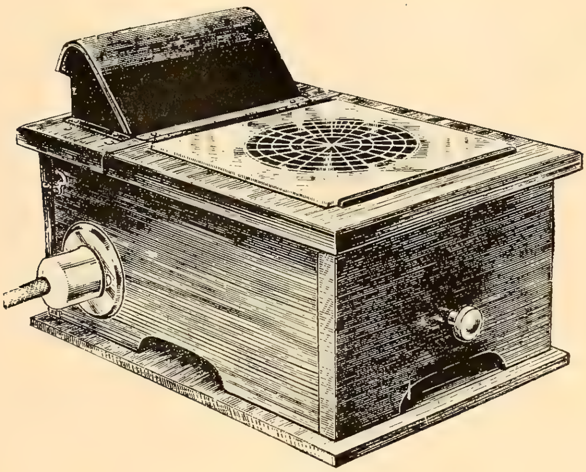
12075

12070 **Cotton Absorbent.** In 1-lb. packages ....Each .75

12075 **Cotton—For plugging test tubes** ....Per bundle .30

12080 **Cotton Applicators (Swab Sticks).** Polished, round, hard wood stocks, 6½ in. long; 72 doz. to box; 6 boxes to a carton.............Per box .50
Per carton 2.50

12085 **Cotton Applicators.** Same as No. 12080 above, but 12 in. long; 1000 in a bundle; 50 bundles in a case ....Per bundle .85
Per case 36.00



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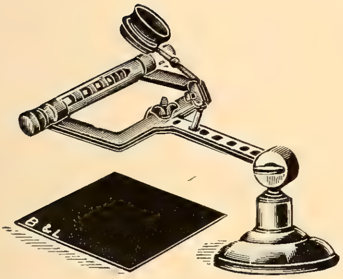
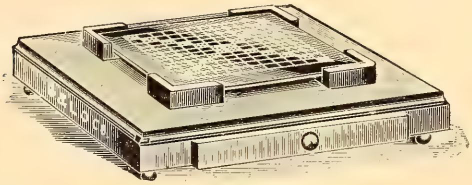


19095



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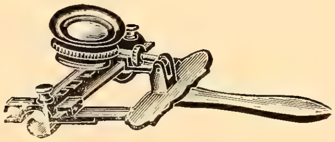
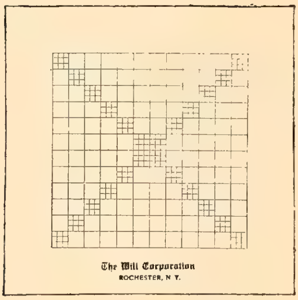


12090

12090	**Counting Apparatus—Esmarch's.** With handle	Each	6.00
12095	**Counting Apparatus—Esmarch's.** Mounted on stand and provided with white and black backgrounds	Each	9.00
12105	**Counting Apparatus—Stewart's.** For use in counting bacteria colonies; consists of hardwood box, 12 x 8 x 6 in., in which is placed 16-candle-power incandescent lamp and an adjustable support for carrying the Petri dish, illuminated by oblique rays from lamp, which do not pass into eyes of the operator; ruled glass plate is provided on top of box, and count is made by viewing colonies on Petri dish through the glass plate	Each	18.00
12108	**Ruled Counting Plate** only for No. 12105 above	Each	6.00
12115	**Counting Apparatus—Wolffhuegel's.** For counting colonies of bacteria in plate cultures; consists of wooden base, 270 mm square, with drawer for accessories and a ruled, glass plate; rulings are 10 mm squares, with diagonal rows ruled to 3 mm squares; ruled surface is 120 mm square; black and white backgrounds are provided	Each	8.00



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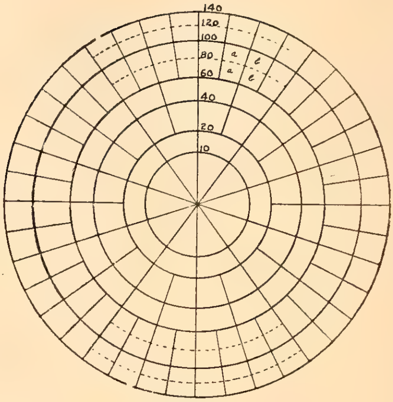
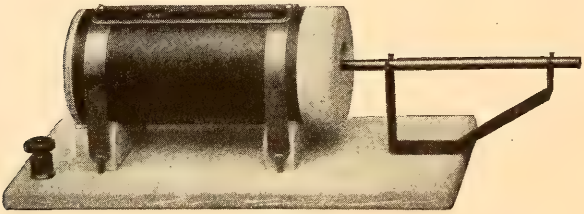


JEFFER'S PLATE
For Counting Colonies of Bacteria on Circular Plates.
The area of each division is one square centimeter.

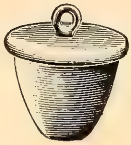
12130



12140

No.	Description		Price
12118	**Ruled Counting Plate** only for No. 12115 above	Each	4.00
12125	**Counting Plates—Wolffhuegel's.** Same as the above No. 12118, but ruled on carboard, with white lines on dark background on one side and with black lines on white background on the other side. Size, 190 mm square	Each	.25
12130	**Counting Plate—Jeffer's.** For use with Wolffhuegel apparatus; ruled on glass; circular surface is divided into sectors, subdivided into small spaces of equal area (See "Journal of Applied Microscopy and Laboratory Methods," Vol. I, No. 3)	Each	4.00
12135	**Counting Plate—Jeffer's.** Same as above No. 12130, but ruled on paper	Each	.25
12140	**Cremator—De Khotinsky's.** For flaming the platinum loops in inoculating culture tubes or making sputum smears, eliminating the spattering so dangerous to the health of the operator when using a Bunsen burner flame for the purpose; the rapid flaming requires but a few moments and is complete, since the bright red heat, to which the loops are subjected, removes all carbonized material; consists of a tube of heat resisting material, 10 cm long x 1 cm inside diameter, closed at one end and wound with nichrome wire, mounted in a neatly finished, brass cylinder, the space between being filled with magnesia-asbestos; has base of asbestos board, to which are attached the binding posts for electrical connection and a support for the handle of the platinum loop.		
	For 110 volts	Each	10.00
	For 220 volts	Each	11.00

(Be sure to state voltage when ordering.)



5570-80

5570 **Crucibles.** Of Coors porcelain; high form, glazed throughout with exception of outside bottom surface; without cover.

Size No.	000	00	0	1	1a
Diameter rim, mm	26	30	35	41	45
Diameter bottom, mm	12	14	17	20	21
Height, mm	19	25	27	35	40
Capacity, cc	5	10	15	30	40
Each	.11	.14	.18	.29	.34

Size No.	2	3	4	5
Diameter rim, mm	52	62	72	87
Diameter bottom, mm	25	30	34	40
Height, mm	43	50	59	72
Capacity, cc	57	95	155	280
Each	.36	.42	.54	.66

5575 **Covers.** For the above crucibles No. 5570.

Size No.	000	00	0	1	1a
Diameter, mm	32	35	42	47	56
Each	.06	.06	.06	.08	.11

Size No.	2	3	4	5
Diameter, mm	59	73	81	95
Each	.11	.14	.14	.18

5580 **Crucibles.** Of Ohio porcelain; high form, without cover.

Size No.	000	00	0	1
Capacity about, cc	5	10	15	25
Diameter about, mm	26	30	35	41
Height about, mm	19	25	27	35
Each	.10	.15	.19	.26

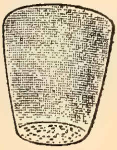
Size No.	2	3	4	5
Capacity about, cc	57	95	155	280
Diameter about, mm	52	62	72	87
Height about, mm	43	50	59	72
Each	.36	.46	.51	.65

5585 **Covers.** For the above crucibles No. 5580.

Size No.	000	00	0	1
Each	.06	.06	.06	.06

Size No.	2	3	4	5
Each	.09	.15	.16	.20

5590



5610-20

5590 **Crucibles.** Of Coors porcelain; low form, without cover; glazed throughout, with exception of outside bottom surface.

Size No.	0000	000	00	0	1
Diameter rim, mm	18	32	37	41	46
Diameter bottom, mm	8	13	15	15	18
Height, mm	12	19	21	25	29
Capacity, cc	2.5	8	12	17	30
Each	.11	.14	.18	.22	.30

Size No.	2	3	4	5
Diameter rim, mm	56	67	81	96
Diameter bottom, mm	18	23	29	35
Height, mm	36	44	52	65
Capacity, cc	50	90	145	265
Each	.41	.52	.60	.74

5595 **Covers.** For the above crucibles No. 5590.

Size No.	0000	000	00	0	1
Diameter, mm	22	39	44	47	52
Each	.06	.06	.06	.08	.08

Size No.	2	3	4	5
Diameter, mm	65	76	88	107
Each	.10	.14	.18	.22

5610 **Crucibles—Gooch.** Of Coors porcelain; with perforated bottom; glazed throughout, with exception of outside bottom surface.

Size.No.	2	2a	3	4
Diameter rim, mm	27	33	35	40
Diameter bottom, mm	18	20	22	25
Height, mm	30	33	40	43
Capacity, cc	10	20	25	35
Each	.36	.42	.48	.54

5615 Covers for Gooch Crucibles, No. 5610 above.

Size.No.	2	2a	3	4
Diameter, mm	35	39	42	47
Each	.06	.06	.06	.08

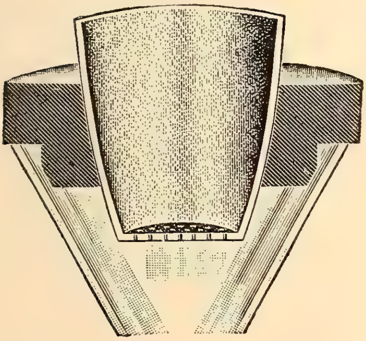
5620 **Crucibles—Gooch.** Of Ohio porcelain, glazed inside and out; with permanent, perforated bottom, perforations being ½ mm in diameter.

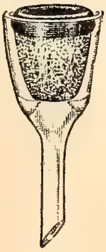
Size No.	2	3	4
Capacity about, cc	10	25	35
Diameter about, mm	27	35	40
Height about, mm	30	40	43
Each	.30	.40	.50

5625 Covers for Gooch Crucibles, No. 5620 above.

Size No.	2	3	4
Each	.05	.05	.07

5630 **Crucibles—Gooch.** Of Coors porcelain; with two holes for suspending in extraction apparatus; Size No. 3; diameter rim, 35 mm; capacity, 25 cc ---Each .48


12145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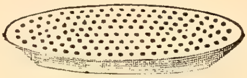
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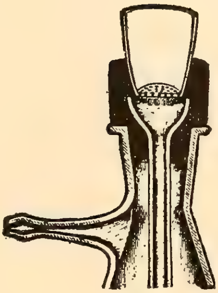

12155

5645 **Crucibles—Gooch.** Of Coors porcelain, glazed inside and out; with straight sides and solid, perforated bottom.

Size No.	1	3
Diameter top, mm	33	39
Diameter bottom, mm	20	26
Height, mm	33	40
Capacity, cc	15	25
Each	.42	.48

5650 **Covers** for Gooch Crucibles, No. 5645 above.

Size No.	1	3
Diameter rim, mm	40	46
Each	.06	.08

5675 **Crucibles—Caldwell.** Of Coors porcelain, glazed inside and out; without cover or perforated disk; with open, flanged bottom to hold disk.

Size No.	1	3
Diameter top, mm	33	39
Diameter bottom, mm	20	26
Height, mm	33	40
Capacity, cc	15	25
Each	.36	.42

5680 **Covers** for Caldwell Crucibles No. 5675 above.

Size No.	1	3
Diameter rim, mm	40	46
Each	.06	.08

5685 **Perforated Disks** for Caldwell Crucibles and funnels; sizes 6 to 9; with beveled edges.

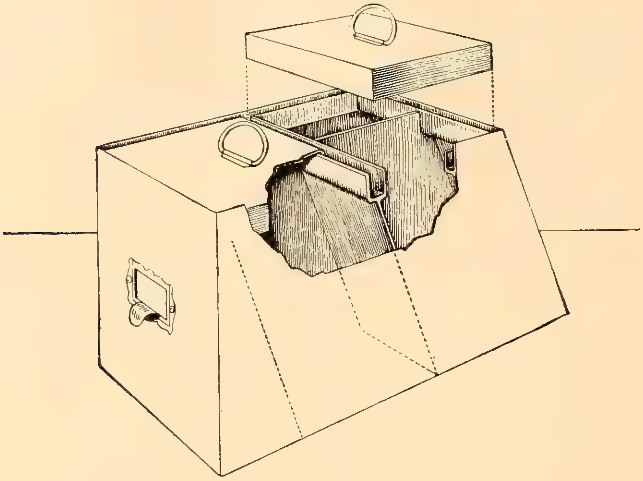
Size No.	1	2	3	4	5
Diameter rim, mm	15	20	22	25	30
Thickness, mm	1½	1½	1½	1½	1½
Each	.20	.23	.24	.24	.28

Size No.	6	7	8	9
Diameter rim, mm	38	50	60	75
Thickness, mm	4	4	4	4
Each	.36	.46	.54	.72

12145 **Crucible Holder—Gooch, Bailey's.** Accommodates a 25 cc porcelain Gooch crucible; fits ordinary 2-in. glass funnel, the upper edge projecting over the edge of the funnel, making the seal; lower edge of holder rests on side of funnel and supports holder when suction is on the flask; without funnel ________________________________Each .35

12150 **Crucible Holder—Gooch, Spencer's.** Consists of special glass funnel or filter tube, with projecting lug to support crucible, and with rubber ring for use with Alundum crucible; suction makes tight contact between crucible and inside of glass funnel; without crucible ____ Each 1.20

12155 **Crucible Holder—Gooch, Walter's.** Is a combined rubber stopper and Gooch crucible holder that will fit neck of a filter flask up to 45 mm, outside diameter; is easily removed from flask, and economical; glass part is protected from breakage; with funnel________Each .65



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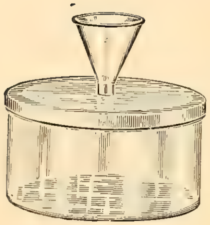

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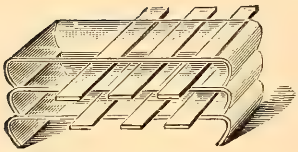

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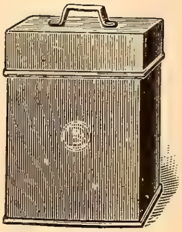


12159

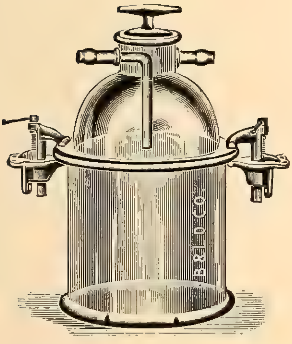
12156 **Culture Tube Cabinet.** For holding sterilized media culture tubes; made of heavy tin, black japanned; construction permits lid to rest in layer of heavy oil, placed in the groove shown in illustration; each space is divided by a partition, so that four kinds of material may be kept in a single box, each distinctly separate from the other; media may be kept in this cabinet an indefinite length of time, being sealed against contamination from dust or from drying out; size, 35 x 17½ x 17½ cm ---------- Each **22.00**
---------- Per pair, including holder **44.00**

12157 **Culture Dish.** For moulds; consists of a shallow dish, with cover ground on and a funnel ground in the cover; diameter of dish, 100 mm ---------- Each **2.00**

12158 **Culture Plate Bench.** For supporting culture plates; made of one piece of glass with ends bent; size, 140 x 50 x 35 mm ---------- Each **.25**

12159 **Culture Plate Boxes.** For holding plates during sterilization and storing them until used; provided with deep, overhanging cover.

No.	**A**	**B**
	Polished Copper	Sheet Iron
Height, cm	19	19
Width, cm	14 x 5	14 x 5
Each	2.80	**1.60**



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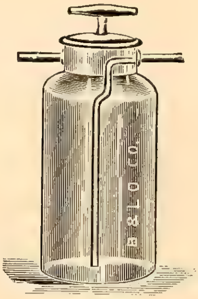

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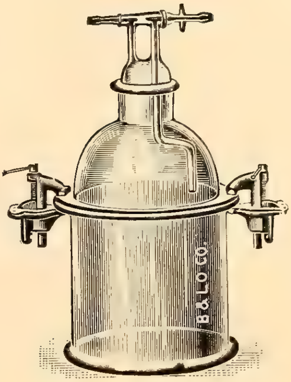


12162

12160 Culture Jars—Novy's. For tube cultures of anaerobic bacteria by gas or pyrogallate methods; consists of glass jar with inlet and outlet tubes in neck, and hollow stopper, having tube reaching to bottom of jar and handle for turning, ground into neck.

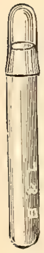
No.	A	B
Height, mm	150	200
Diameter, mm	80	100
Each	**3.50**	**4.20**

12161 Culture Jar—Novy's. For plate cultures of anaerobic bacteria by gas or pyrogallate methods; in two sections to permit use of Petri dishes; sections have wide ground flanges which, with rubber band between, form air-tight connection, being held by three metal clamps; may be used also as desiccator for drying in a current of hydrogen or other gases; furnished complete with rubber band and three clamps ---------- Each **7.00**

12162 Culture Jar—Novy's Improved. For plate cultures of anaerobic bacteria by vacuum, gas or pyrogallate methods; special feature is addition of a stopcock, supported horizontally by glass tubes on the regular stopper, which relieves the latter from pressure and allows the vacuum method to be easily employed; otherwise similar in construction to No. 13860 above, but made in two sections to permit use of Petri dishes, sections have wide ground flanges which, with rubber band between, form air-tight connection, being held by three metal clamps; may also be used as desiccator for drying in a current of hydrogen or other gases---------- Each **9.00**

12163 Culture Jar—Novy's Improved. Bands of rubber, for culture jars above ---------- Each **.20**

12164 Culture Jar—Novy's Improved. Clamps only, for culture jars above ---------- Each **.50**



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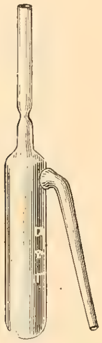

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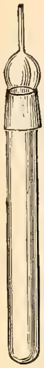

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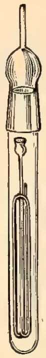

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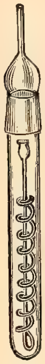

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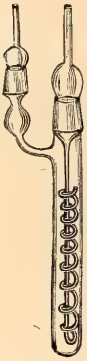
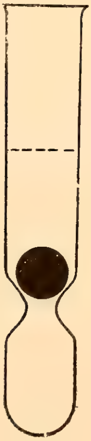


12171

12165 **Culture Tubes.** With cap ground on.

No.	A	B	C
Length, mm	130	155	200
Diameter, mm	16	20	30
Each	.45	.55	.70

12166	**Culture Tube—Chamberlain's.** Without side tube	Each	.20
12167	**Culture Tube—Chamberlain's.** Of clear white glass; for blood serum	Each	.35
12168	**Culture Tube—Gayon's**	Each	.45
12169	**Culture Tube—Gayon-Dupetit's.** With inner tube of trumpet-form	Each	.75
12170	**Culture Tube—Gayon-Dupetit's.** With inner tube of spiral-form	Each	.80
12171	**Culture Tube—Gayon-Dupetit's.** With inner tube of spiral-form melted in, and side tube	Each	1.25



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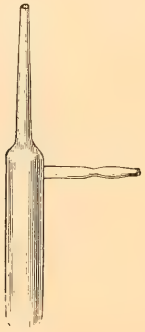

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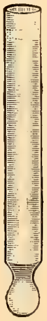


12174

12172	**Culture Tube—Hall's.** For anaerobes, without marble	Each	.30
12173	**Culture Tube—Pasteur's.** With side neck	Each	.35

12174 **Culture Tubes—Roux's.** For potato culture.

No.	A	B
Length, mm	150	200
Diameter, mm	20	30
Each	.18	.22

5700

2300

2305

BAUSCH & LOMB OPT. CO.

2310

5700 **Cups—Swimming.** Of Coors porcelain, with perforations; for washing specimens.

Size No.	1	2
Diameter, mm	27	35
Height, mm	35	50
Each	.60	.78

2300 **Cylinders.** Of heavy glass; with rim around top, unground.

No.	A	B	C	D	E	F	G	H
Height, mm	100	125	125	150	150	150	175	200
Diameter, mm	25	25	40	25	30	40	30	30
Each	.37	.42	.44	.40	.44	.46	.48	.50

No.	I	J	K	L	M	N	O	P
Height, mm	210	235	250	260	300	300	315	350
Diameter, mm	40	55	40	45	40	50	65	50
Each	.52	.55	.55	.58	.68	.68	.80	.78

No.	Q	R	S	T	U	V	W
Height, mm	365	375	400	450	450	450	500
Diameter, mm	65	50	50	50	65	75	50
Each	.92	.78	.90	1.00	1.15	1.40	1.15

2305 **Cylinders.** With ground rim for glass plates.

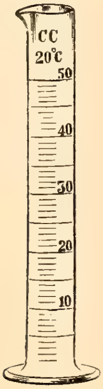
No.	A	B	C	D
Height, mm	200	300	300	400
Diameter, mm	100	80	100	80
Each	1.20	1.30	2.00	2.00

2310 **Cylinders.** Of heavy glass; with lip.

No.	A	B	C	D	E	F	G	H
Height, mm	100	125	125	150	150	175	200	200
Diameter, mm	25	25	40	25	40	30	25	30
Each	.37	.42	.44	.40	.46	.48	.45	.50

No.	I	J	K	L	M	N	O	P
Height, mm	210	250	260	300	300	315	350	365
Diameter, mm	40	40	45	40	50	65	50	65
Each	.52	.55	.58	.68	.68	.80	.78	.92

No.	Q	R	S	T	U	V	W	X
Height, mm	375	400	400	400	450	450	450	500
Diameter, mm	50	50	65	75	50	65	75	50
Each	.78	.90	.95	1.15	1.00	1.15	1.40	1.15



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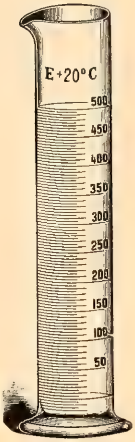

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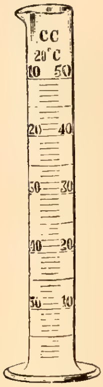


2330

2315 Cylinders—Graduated. With single graduations and lip; on foot.

No.	A	B	C	D	F	F
Capacity, cc	5	10	15	25	50	75
Graduated, cc	1/10	1/5	1/5	½	½	1
Each	.30	.32	.34	.44	.50	.52

No.	G	H	I	J	K	L
Capacity, cc	100	125	150	200	250	300
Graduated, cc	1	2	2	2	2	2
Each	.54	.64	.74	.76	.78	.86

No.	M	N	O	P	Q	R
Capacity, cc	500	1000	1500	2000	3000	4000
Graduated, cc	5	10	20	20	20	50
Each	1.08	1.60	3.50	4.00	5.50	7.00

2320 Cylinders—Graduated. Graduated at 20°C. to meet the requirements of the Bureau of Standards.

No.	A	B	C	D	E	F	G	H
Capacity, cc	5	10	25	50	100	250	500	1000
Graduated, cc	1/20	1/10	1/5	1/5	1	5	5	10
Each	2.00	2.00	3.00	3.50	3.00	4.50	5.00	7.00

2325 Cylinders—Graduated. Graduated at 20°C. for inflow or outflow, to meet the requirements of the Bureau of Standards; with Government control stamp and official certificate of correction.

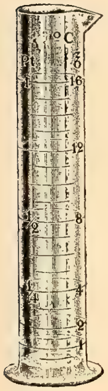
No.	A	B	C	D	E
Capacity, cc	50	100	250	500	1000
Graduated, cc	1/5	1	5	5	10
Each	6.00	5.75	7.25	8.00	9.75

2330 Cylinders—Graduated. Double graduations, reading up and down; with lip; on foot.

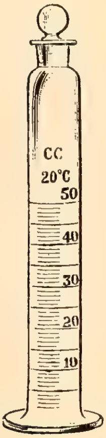
No.	A	B	C	D	E	F	G
Capacity, cc	5	10	15	25	50	75	100
Graduated, cc	1/10	1/5	1/5	1/2	1	1	1
Each	.34	.40	.44	.50	.60	.65	.70

No.	H	I	J	K	L	M
Capacity, cc	125	150	200	250	300	500
Graduated, cc	2	2	2	2	2	5
Each	.80	.90	1.00	1.10	1.30	1.50

No.	N	O	P	Q	R
Capacity, cc	1000	1500	2000	3000	4000
Graduated, cc	10	20	20	20	50
Each	2.00	5.00	6.00	7.50	9.00

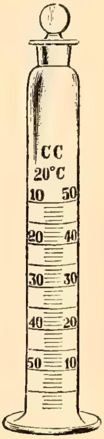


2335



2355

2360-65



2370

2335 Cylinders—Graduated. Graduated in ounces; with lip; on foot.

No.	A	B	C	D	E	F	G
Capacity, oz.	1	2	4	8	16	32	64
Each	.40	.50	.60	1.00	1.50	1.80	4.00

2340 Cylinders—Graduated. Graduated both in ounces and cubic centimeters; with lip; on foot.

No.	A	B	C	D	E	F	G
Capacity, oz.	1	2	4	8	16	32	64
Capacity, cc	30	60	125	250	500	1000	2000
Each	.60	.75	.85	1.50	1.80	2.50	6.00

2355 Cylinders—Mixing. With ground-glass stopper; on foot; graduations reading up only.

Size No.	A	B	C	D	E	F	G
Capacity, cc	10	15	25	50	100	150	200
Each	.72	.80	.94	1.10	1.24	1.54	1.56
Size No.	H	I	J	K	L	M	N
Capacity, cc	250	300	400	500	1000	1500	2000
Each	1.68	1.86	2.30	2.58	3.60	5.50	6.00

2360 Cylinders—Mixing. With glass stopper; graduated at 20°C. to meet the requirements of the Bureau of Standards.

No.	A	B	C	D	E	F	G
Capacity, cc	10	25	50	100	250	500	1000
Graduated, cc	1/10	1/5	1/5	1	5	5	10
Each	2.40	3.50	3.90	3.50	5.00	5.40	7.50

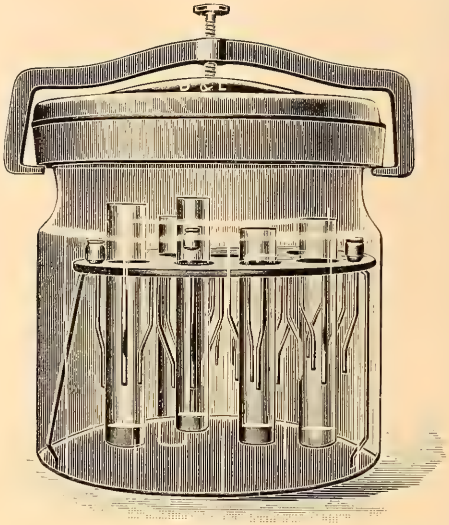
2365 Cylinders—Mixing. With glass stopper; graduated at 20°C. for inflow or outflow, to meet the requirements of the Bureau of Standards; with Government control stamp and official certificate of correction.

No.	A	B	C	D	E
Capacity, cc	50	100	250	500	1000
Graduated, cc	1/5	1	5	5	10
Each	6.50	6.20	7.60	9.00	10.00

2370 Cylinders—Mixing. With ground-glass stopper; on foot; graduated to read up and down.

Size No.	A	B	C	D	E	F	G
Capacity, cc	10	15	25	50	100	150	200
Each	.80	.90	1.00	1.20	1.40	1.70	1.80
Size No.	H	I	J	K	L	M	N
Capacity, cc	250	300	400	500	1000	1500	2000
Each	2.00	2.30	2.75	3.00	4.00	7.00	8.00

12175

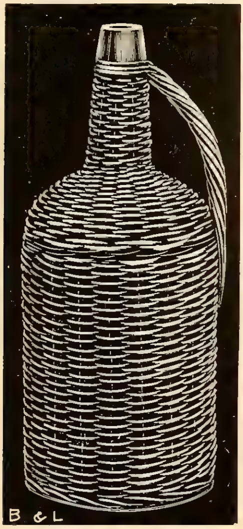


12176

12175 **Dakin's Solution Apparatus.** Consists of one 12-lb., seamless steel cylinder of chlorine with special regulating valve, special connection and silver connection; one meter of orifice flow type, the orifice in the connection being calibrated to give a definite quantity of Dakin's solution each minute, which quantities are indicated on the scale attached to the glass U-tube, one point giving 500 cc solution per minute and the other point 750 cc per minute; one extra glass tube, six feet of rubber tubing, size ¼ in., one 20-in. diffusor stem; two diffusors, one 5-gal. glass bottle and metal stand for meter and chlorine container; diffusor is a porous, vitreous substance, through which the chlorine is forced in minute bubbles, the dissolving action of the chlorine being almost instantaneous in the sodium carbonate solution; orifices and scales of different capacities can be furnished if desired, but the orifice and scale in use at any one time must correspond in capacity ....Each 75.00

12176 **Dehydrating Apparatus—Thomas'.** Consists of heavy glass jar, 190 x 190 mm, with a glass cover fitting air-tight; supported in jar are glass cylinders of different diameters and about 150 mm long, each cylinder having in the bottom a replacement chamois skin diaphragm fastened by a nickeled spring; cylinders are supported at any desired height by rubber rings resting on the vulcanite plate instead of springs, as shown in illustration; the dehydrating fluid is placed in the jar and the cylinders partly filled with a weaker solution in which the tissue to be hardened is placed; by osmosis the dehydrating fluid gradually acts on the tissue, which does not shrink, as when hardened in the usual manner ....Each 9.00

We supply the various **Dichloramin-T** products



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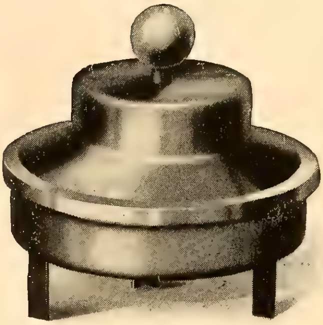
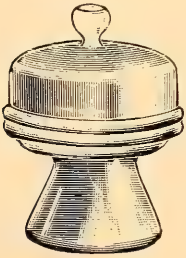


12177

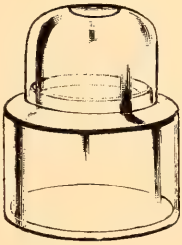
2395 **Demijohns.** Of glass, with wicker cover.

No.	A	B	C	D	E
Capacity, gal.	½	1	2	3	5
Each	.75	.90	2.50	2.80	3.25

12177 **Desiceator—Air Cooling.** Intended to lessen time required for cooling dishes, crucibles, etc., before weighing; made of metal, abolishing danger of breakage, and making it possible for dishes to be cooled to very very nearly the temperature of the balance; dishes cool to room temperature in about one-third the time required by glass desiccators; inside dimensions, 12 in. diameter, 3 in. height; of burnished copper ---------- Each 15.00



2400

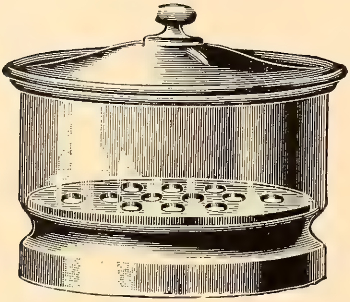


2405

2400 **Desiccator—Atwater's.** With triangle; inside diameter, approximately 115 mm ---------- Each 4.00

2405 **Desiccator—Fresenius'.** With round, ground-on cover.

No.	A	B	C
Diameter, mm	80	100	120
Each	.90	1.20	1.50



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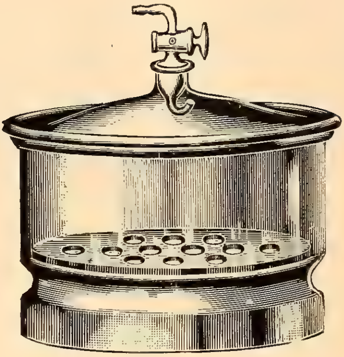


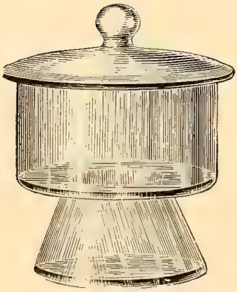
2415

2410 Desiccators—Fruehling and Schultz'. With glazed, porcelain plate, profusely perforated with small holes.

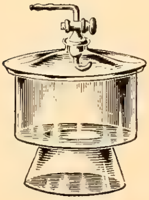
No.	A	B
Diameter, mm	200	250
Each	9.00	13.75

2415 Desiccators—Fruehling and Schultz'. Same as No. 2410 above, but with ground-in stopcock in lid.

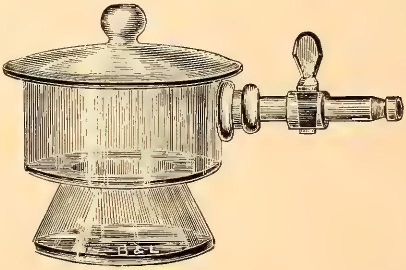
No.	A	B
Diameter, mm	200	250
Each	14.50	19.00



2430



2435



2440

2430 Desiccators—Scheibler's. Of extra fine quality; with wide, finely ground flange, to which covers are accurately fitted.

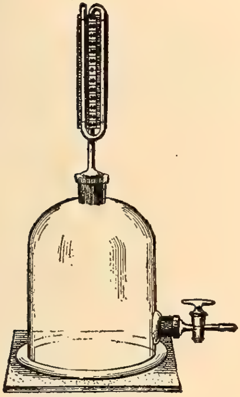
No.	A	B	C	D	E
Diameter, mm	100	125	150	200	250
Each	1.10	1.40	1.75	7.50	12.50

2435 Desiccators—Scheibler's. Vacuum; same as No. 2430 above, but with ground-in, glass stopcock and hook in lid.

No.	A	B	C
Diameter, mm	150	200	250
Each	9.00	11.50	15.00

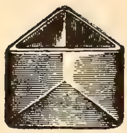
2440 Desiccators—Scheibler's. Vacuum; same as No. 2430 above, but with side-tube and stopcock ground in side of desiccator.

No.	A	B
Diameter, mm	100	120
Each	3.00	3.50



2445

5705-10



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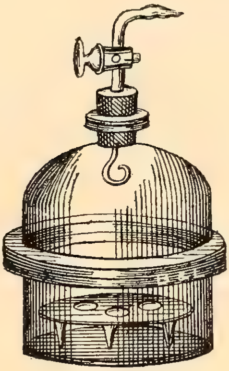


2450

2445 **Desiccator—Vacuum.** Of heavy glass, with ground-in manometer and glass stopcock; height, 200 mm; diameter, 150 mm ....Each 6.00

2450 **Desiccators—Vacuum.** Of very heavy glass, to withstand considerable pressure; with rubber stopper, glass stopcock and porcelain plate.

No.	A	B	C
Diameter, mm	100	140	160
Each	3.00	4.00	5.00

2455 **Desiccators—Triangular.** Of heavy glass; designed for use in balance cases; width of side, 2 in.; height, 1½ in.............Each .75

5705 **Desiccator Plates.** Of Coors porcelain; glazed on one side; on three small feet.

Size No.	0	1	2	2a
Diameter, mm	85	95	115	120
Number of holes	3	3	4	5
Diameter of holes, mm	23	30	30	23
Each	.78	.90	1.02	1.14

Size No.	2b	3	4	5
Diameter, mm	125	140	190	240
Number of holes	8	5	7	8
Diameter of holes, mm	23	30	30	30
Each	1.32	1.50	2.40	3.00

5710 **Desiccator Plates.** Of Ohio porcelain; with holes; glazed on top; mounted on three small feet.

Size No.	A	B	C	D	E
Diameter, mm	90	110	140	190	230
Number of holes	3	4	5	6	8
Diameter of holes, mm	26	26	26	26	26
Thickness, mm	5	5	5	6	7
Each	.80	1.00	1.20	2.00	2.50

5715 **Desiccator Plates.** Of Coors porcelain; glazed on one side; without feet.

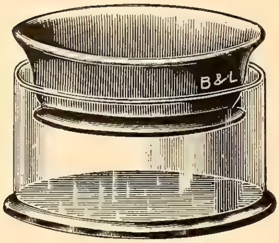
Size No.	4	5
Diameter, mm	190	230
Diameter of holes	7	8
Diameter of holes, mm	30	30
Each	2.10	2.52

5720 **Desiccator Plates.** Of Coors porcelain; glazed on one side; without feet; with numerous small holes, thumb hole in center.

Size No.	4	5
Diameter, mm	190	230
Number of holes	700	900
Diameter of holes, mm	2	2
Each	2.10	2.52

5725 **Desiccator Plates.** Of Ohio porcelain; without feet; top glazed; profusely perforated.

Size No.	A	B	C
Diameter, mm	140	190	230
Diameter of holes, mm	5½	5½	5½
thickness, mm	5	6	7
Each	1.25	2.00	2.50



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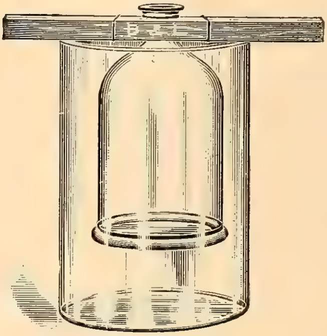


2460

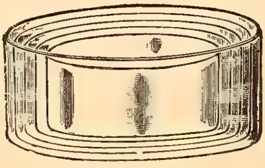
2460 **Dialyzers.** Consist of open top, bell glass suspended in glass jar; large end of bell glass covered with parchment.

No.	A	B	C	D	E
Capacity, liters	2	4	6	8	12
Each	1.50	2.50	4.00	5.50	7.50

2465 **Dialyzers—Graham's.** Consist of two glass parts; inner part, to which parchment paper is attached, is supported by its rim upon edge of the outer vessel; supplied without parchment paper.

No.	A	B
Diameter, mm	150	250
Each	1.60	3.00

12178 **Diamond.** For writing on glass; a fine diamond, mounted in a metal handle -- Each 7.50



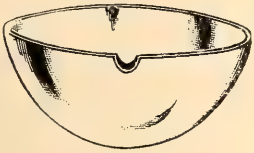
2470

2470 **Dishes—Crystallization—Low Form.** Of resistance glass; with flat bottom and polished edges.

No.	A	B	C	D	E	F
Diameter, mm	40	50	60	70	80	90
Height, mm	30	35	35	35	40	50
Each	.13	.13	.14	.16	.17	.18

No.	G	H	I	J	K	L
Diameter, mm	100	115	125	150	170	190
Height, mm	50	60	65	75	85	95
Each	.22	.31	.40	.53	.70	.88

No.	M	N	O	P
Diameter, mm	215	250	300	400
Height, mm	110	125	150	200
Each	1.00	2.00	2.60	5.50



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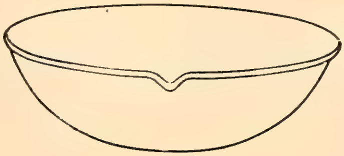


5730

2480 **Dishes—Evaporating.** Of resistance glass; with round bottom and lip.

No.	A	B	C	D	E
Diameter, mm	50	60	70	80	90
Capacity, cc (approx.)	25	40	75	100	150
Each	.16	.18	.20	.26	.33

No.	F	G	H	I
Diameter, mm	105	125	150	200
Capacity, cc (approx.)	250	400	700	1700
Each	.40	.60	.70	1.00

2485 **Dishes—Evaporating.** Of resistance glass; with flat bottom and lip.

No.	A	B	C	D	E
Diameter, mm	50	60	70	80	90
Capacity, cc (approx.)	25	40	70	90	140
Each	.16	.18	.20	.26	.33

No.	F	G	H	I
Diameter, mm	105	125	150	200
Capacity, cc (approx.)	250	400	675	1700
Each	.40	.60	.70	1.00

5730 **Dishes—Evaporating.** Of Coors porcelain; with lip; sizes up to 5 are glazed inside and outside, with exception of rim; larger sizes are partly glazed outside.

Size No.	000	00	0	1	2	3
Diameter, mm	60	70	80	85	90	100
Height, mm	24	27	30	33	37	42
Capacity, cc	35	60	80	100	140	175
Each	.14	.22	.24	.36	.42	.48

Size No.	4	5	6	6a	7	8
Diameter, mm	110	120	145	162	185	215
Height, mm	43	50	48	51	54	63
Capacity, cc	210	300	385	535	765	1285
Each	.54	.66	.84	.96	1.08	1.44

Size No.	8a	9	10	11	12	13
Diameter, mm	230	265	305	360	400	460
Height, mm	70	80	95	116	140	175
Capacity, cc	1430	2200	3250	5700	10000	16500
Each	1.80	2.16	2.60	4.80	10.80	21.60

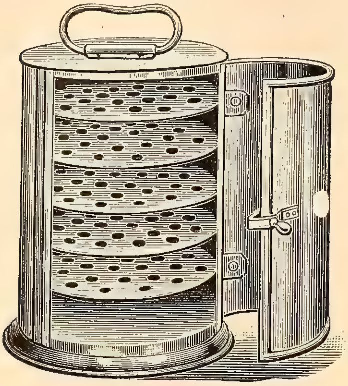
5745 **Dishes—Evaporating.** Of Coors porcelain; with wide lip and heavy, welter rim; glazed inside, but only partly outside.

Size No.	12	13
Diameter, mm	400	460
Height, mm	140	175
Capacity, cc	10000	16500
Each	14.40	24.00

5750 **Dish—Evaporating.** Of Coors porcelain; deep form with long lip; glazed inside, but only partly outside; used in cataract system of acid concentration; Size A; diameter outside, 320 mm; diameter inside, 306 mm; height, 140 mm; capacity, 3250 cc______________Each 11.70

5755 **Dish—Evaporating.** Of Coors porcelain; with lip, straight sides, flat bottom; glazed throughout, with exception of outside bottom surface; Size A: diameter, 420 mm; height, 110 mm; capacity, 10500 cc ____Each 24.00

5760 **Dish—Evaporating.** Of Coors porcelain; without lip, straight sides; glazed throughout, with exception of outside bottom surface; Size A: diameter, 180 mm; height, 75 mm; capacity, 1300 cc ____________ 1.98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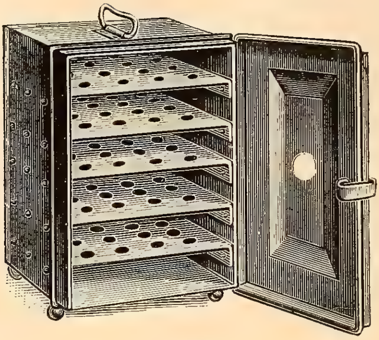
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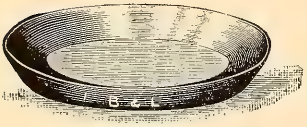
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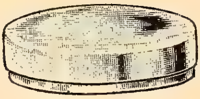
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12185

12180 **Dishes—Lead.** Used as containers in etching glass with hydrofluoric acid.

No.	A	B	C	D	E	F
Diameter, mm	50	65	75	100	125	150
Each	.10	.15	.17	.25	.40	.55

2490 **Dishes—Petri.** Of resistance glass; with overlapping, loosely fitting glass covers.

No.	A	B	C	D	E	F	G	H
Diameter, mm	50	60	65	75	80	80	90	90
Depth, mm	10	10	25	10	10	20	10	20
Each	.23	.23	.24	.23	.24	.24	.24	.26

No.	I	J	K	L	M	N
Diameter, mm	95	100	100	100	115	120
Depth, mm	20	10	15	20	25	15
Each	.28	.28	.28	.28	.50	.50

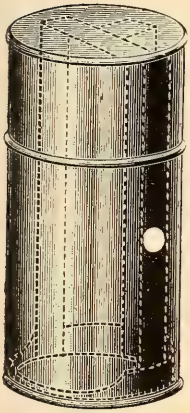
No.	O	P	Q	R	S	T	U
Diameter, mm	120	125	150	150	150	200	250
Depth, mm	20	30	15	20	25	20	20
Each	.50	.55	.64	.64	.70	1.10	1.50

12185 **Covers—Petri Dish.** Of unglazed earthenware; to prevent spreading of growth by water of condensation during incubation; for culture dishes 100 mm in diameter ---------------------------------Each .15
Per dozen 1.40

12190 **Covers—Petri Dish.** Same as No. 12185 above, but of glazed earthenware, to fit dishes 100 x 15 mm---------------------------------Each .25
Per dozen 2.40

12195 **Dish Holder—Petri.** Of polished copper, nickel-plated; provided with five shelves and intended for the sterilization and sterile transportation of Petri and other glass dishes; round form; dimensions, 20 x 13 cm ---------------------------------Each 10.20

12200 **Dish Holder—Petri.** Similar to No. 12195 above, but square and dimensions, 18 x 13 x 13 cm ---------------------------------Each 9.00



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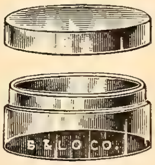

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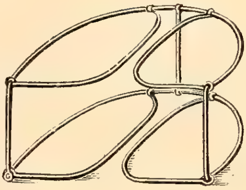

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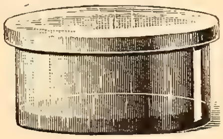

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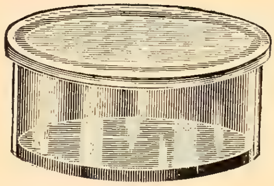


2496

12205 **Dish Holder—Petri.** Polished copper cylinder, with cover and a tray which lifts out; dimensions, 23 x 11 cm ---------------------- Each 3.60

12210 **Dish Holder—Petri.** Same as No. 12205 above, but made of sheet iron -- Each 3.00

12215 **Dish Holder—Petri.** Made of nickeled spring wires, with brazed joints; holds six 10 cm dishes placed one above the other ------------- Each .75

12220 **Dish Holder—Petri.** Same as No. 12215 above, but holds three dishes -- Each .75

2495 **Dishes—Preparation, Stender's.** Of glass; with grooved, accurately ground cover to fit.

No.	A	B	C	D
Height, mm	24	30	35	90
Diameter, mm	36	50	60	60
Each	.14	.18	.25	.25

2496 **Dishes—Preparation, Stender's.** German make; of best white glass; with accurately ground, air-tight cover.

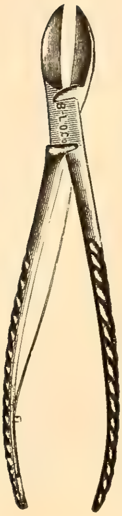
No.	A	B	C	D	E	F	G	H
Height, mm	25	30	35	40	50	60	70	90
Diameter, mm	40	50	60	80	100	120	140	50
Each	.30	.30	.35	.50	.60	1.00	1.40	.40

2498 **Dishes—Preparation.** Of clear, white glass; with loosely fitting cover; while not perfectly air-tight, deep rim of cover renders dish sufficiently so for most purposes.

No.	A	B	C	D	E
Diameter, mm	50	60	70	90	100
Each	.20	.25	.35	.40	.50

2500 **Dishes—Preparation.** Of clear, white glass; with broad flange at top and perfectly ground, air-tight cover with knob; particularly convenient as receptacle for clean cover glasses.

No.	A	B
Height, mm	30	35
Diameter, mm	50	65
Each	.40	.50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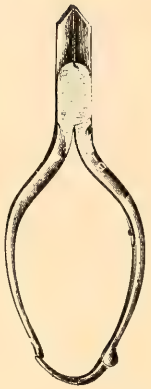
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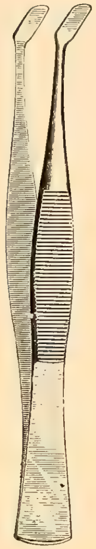
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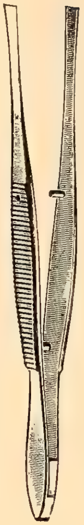
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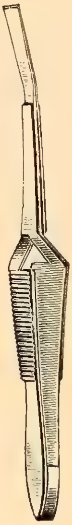
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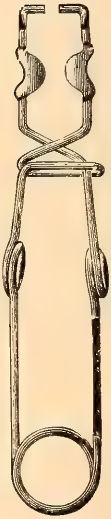
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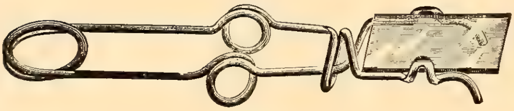
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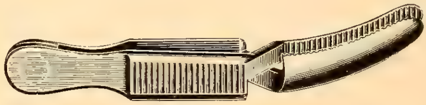

12235

Dissecting Instruments

12235 **Forceps—Artery (Serrafines).** Small, self-closing steel forceps, with corrugated points and handles; nickeled; length, 55 mm--------Each .75

12240 **Forceps—Bone-Cutting.** With strong, accurately made blades; pinless lock joint holding blades together firmly during use, and also permitting their separation for cleaning; spring is removable.

No.	A	B
Length, mm	200	225
Each	5.00	6.00

12245 **Forceps—Bone-Cutting.** Of best steel, nickel-plated; with very strong, curved blades and spring for separating the blades------------Each 1.20

12250 **Forceps—Cover Glass.** These forceps are all of steel, best quality finish and nickeled; with corrugated handles-----------------Each 1.00

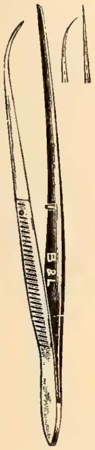
12255 **Forceps—Cover Glass.** With bent blades; length, 105 mm--------Each 1.00

12260 **Forceps—Cover Glass.** With thin, straight blades and guide pin--Each .70

12265 **Forceps—Cover Glass.** Self-closing; with thin, bent blades; length, 125 mm --Each 1.00

12270 **Forceps—Cover Glass and Slide Holder Combined, Dr. Boston's.** Made of nickeled brass, first quality; length, 140 mm--------------Each .80

12275 **Forceps—Slide Holder, Dr. Boston's.** Made of nickeled brass, first quality; length, 140 mm ------------------------------------Each .60



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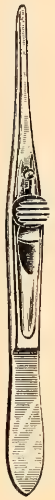

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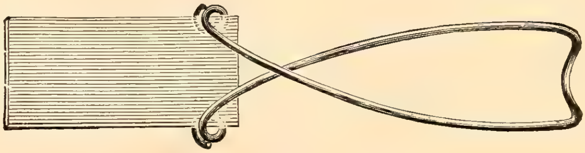

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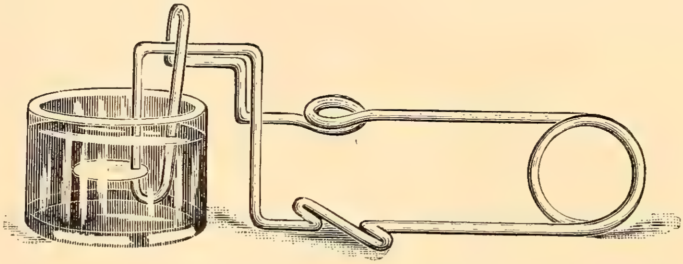

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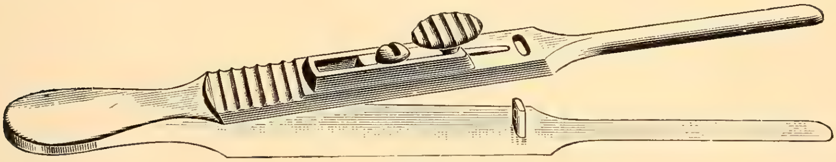

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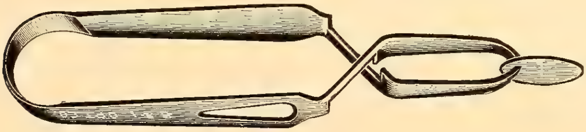
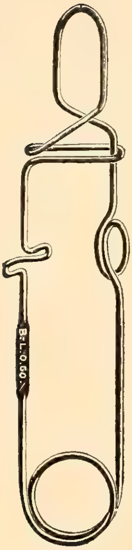


12290

12280	**Forceps—Slide Holder, Kirkbride's.** Made of nickeled brass, first quality; length, 115 mm	Each	.10
12285	**Forceps—Cover Glass, Dr. Kaltyer's.** Made of nickeled brass, first quality; length, 100 mm	Each	.50
12290	**Forcept—Cover Glass, Cornet's.** Made of one piece of spring brass, nickel-plated; are self-closing and hold cover firmly, only a small surface of the cover being touched by the forcep tips; length, 120 mm	Each	.45
12295	**Forceps—Cover Glass, Ehrlich's.** With long, flat blades which come together accurately so that a cover is held firmly on the edge during the operation of making a blood spread; have locking device to hold blades together; length, 135 mm	Each	1.25
12300	**Forceps—Cover Glass, Novy's.** Have flat, lower blade with broad end and thin, sharp edge, and surved, pointed upper blade; thin edge of lower blade enables a cover to be easily picked up; curve of upper blade prevents capillary drainage, while small contact of point on specimen enables it to be thoroughly washed; made of steel, nickel-plated	Each	.70
12305	**Forceps—Cover Glass, Novy's.** Have locking device which holds the points together, as shown in illustration	Each	1.25



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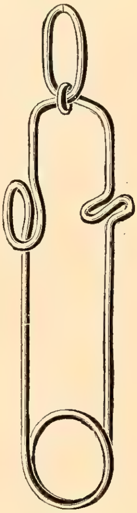

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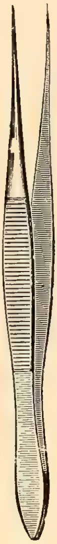

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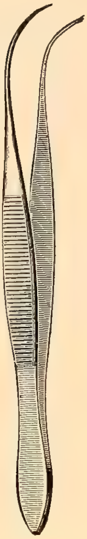

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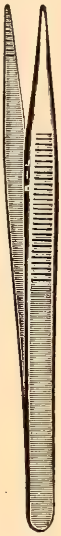

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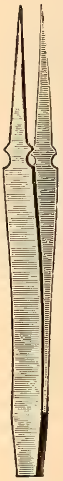


12350

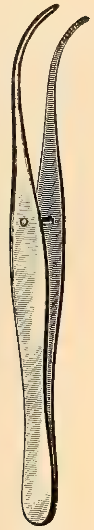
12310 **Forceps—Cover Glass, Stewart's.** Made of nickeled, spring wire; light and easily sterilized; self closing; only a small surface of the cover is grasped by the blades; may be laid on table, holding the cover perfectly level ---------- Each .15

12315 **Forceps—Cover Glass, Stewart's.** Have ring to prevent blades from spreading sideways ---------- Each .15

Forceps—Dissecting. Made of best quality steel, nickel-plated and finished in best possible manner; handles are corrugated and points file-cut; guide pins ensure accurate closing of points.

	Description	Length, mm	Finish of Points	Each
12320	Fine; straight points	115	Fine file-cut	.50
12323	Fine; curved points	110	Fine file-cut	.50
12325	Medium fine; straight points	115	Fine file-cut	.50
12328	Medium fine; curved points	110	Fine file-cut	.50
12330	Medium heavy; straight points	105	Corrugated	.50
12333	Heavy; straight points	115	Corrugated	.60
12335	Heavy; straight points	130	Corrugated	.60
12338	Heavy; straight points	145	Corrugated	.60
12341	Heavy; straight points; for vertebrate work; no guide pin	125	Corrugated	.45

12350 **Forceps—Dissecting.** Fine; with straight, smooth points; length, 95 mm ---------- Each .25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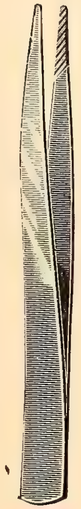
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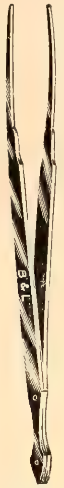
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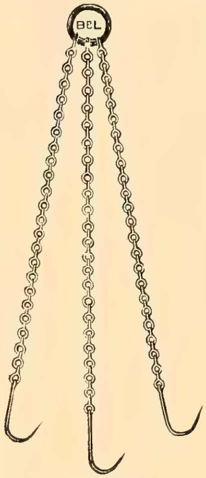
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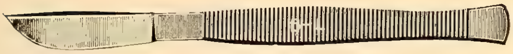
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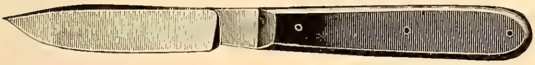
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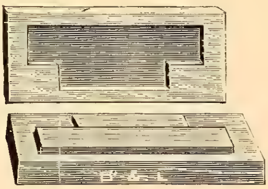

12375

12355 **Forceps—Dissecting.** Fine; with curved, fine file-cut points and guide pin; length, 120 mm ---------- Each .50

12360 **Forceps—Dissecting.** Heavy; with straight, blunt, corrugated points; length, 110 mm ---------- Each .25

12365 **Forceps—Dissecting.** Of spring brass, nickel-plated; with straight, blunt points; length, 83 mm ---------- Each .15

12370 **Forceps.** For removing specimens from deep jars or bottles; made of steel, nickel-plated.

No.	A	B	C	D
Length, mm	250	300	375	450
Each	1.80	3.60	4.50	6.00

12375 **Hones—Blue Green.** For razors, scalpels, etc.; of finest possible grain, free from grit; selected with greatest care and guaranteed perfect in every respect; each is furnished in wood block, with cover and rubbing stone.

No.	A	B	C	D	E
Size, mm	125 x 65	150 x 30	180 x 40	210 x 45	260 x 50
Each	1.10	1.20	1.40	1.60	2.10

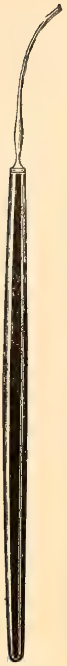
12380 **Hooks and Chains.** Nickel-plated; hooks with sharp points ------ Each .35

12385 **Knife—Cartilage.** All steel, nickel-plated and best quality finish; extra heavy and strong; corrugated handle; cutting edge, 45 mm ---------- Each .80

12390 **Knife—Cartilage.** With good quality finish ---------- Each .40

12395 **Knives—Cartilage** (Prosecting Knives). With ebony handle; blades extra heavy and extra thick at back.

No.	A	B
Cutting edge, mm	70	90
Each	3.00	3.50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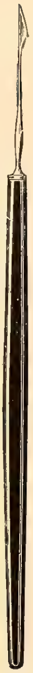
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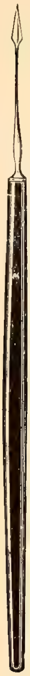
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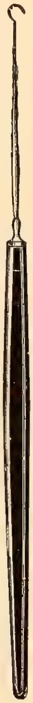
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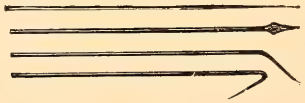
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12440

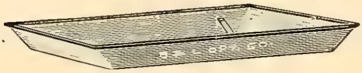
12400	**Needles—Dissecting.** Made of knife steel, with ebony handle; curved, sharp	Each	.40
12405	**Needles—Dissecting.** Same as No. 12400 above, but spear shape, with single cutting edge	Each	.40
12410	**Needles—Dissecting.** Same as No. 12400, but spear shape, with double cutting edge	Each	.40
12415	**Needles—Dissecting.** Same as No. 12400, but hook shape, very fine and delicate	Each	.40
12420	**Needles—Dissecting.** Straight; in cedar wood handle	Each Per dozen	.06 .60
12425	**Needles—Dissecting.** Bent	Each Per dozen	.06 .60
12430	**Needle Holder.** With bone handle and nickeled, adjustable clamp, holding any size needle; steel needles No. 12435 are recommended.		

Size No.	A	B
Length, mm	85	110
Each	.15	.20

12435	**Needles.** For holder No. 13430 above; of steel; length, 50 mm.		

Size No.	A	B	C	D
Per dozen	.20	.30	.20	.20

12440	**Oil Stone.** For sharpening scalpels, etc.; genuine Arkansas stone; length, 75 mm; width, 22 mm	Each	.40



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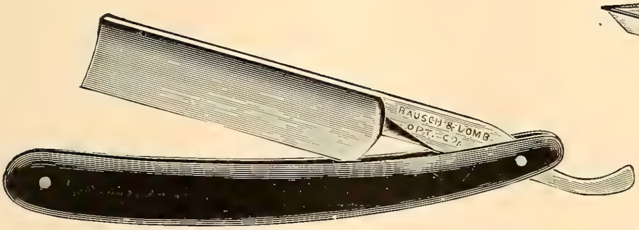
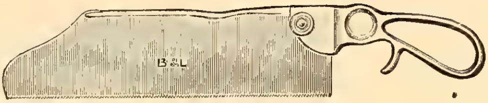


12460-65-70



12475

12445 **Pan—Dissecting.** Of copper, tinned inside; with corner hooks, chains and rings for holding animals; size, 430 x 250 x 30 mm--------Each 4.00

12450 **Pan—Dissecting.** Of heavily tinned metal, japanned; with metal loops in the corners, to which the limbs of animals are tied during dissection; size, 280 x 220 x 35 mm --------------------------------Each .45

12455 **Pan—Dissecting.** Same style as No. 12450 above, but bottom lined with wax ---Each .65

Razors—Section. Folding in case; made of best quality English steel and specially designed for section cutting; quality designated as "Best" has heavy back, less likely to yield under manipulation, while other has lighter weight blade for general laboratory use.

	Quality	Length of Blade, mm	Shape	Each
12460	Best	100	Flat concave	2.50
12465	Best	75	Flat concave	2.50
12470	Good	75	Flat concave	2.00

12475 **Saw—Bone.** Of steel, nickel-plated; with detachable blade for sterilization; length of blade, 200 mm --------------------------------Each 3.50

Scalpels. Of best grade steel, properly tempered to retain a good cutting edge; carefully finished in every detail. We offer the following series, designated by quality:

A Quality. Of superior stock and best attainable quality.

B Quality. For laboratory work, where delicate work is to be done.

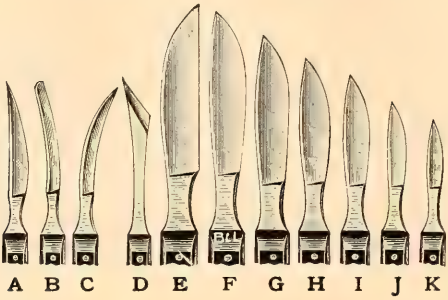
C Quality. For student use in general dissection.

A quality scalpels are made of best selected English steel, evenly tempered, ground to a full concavity to give a sensitive cutting edge, and finely finished; are recommended for the most delicate dissections and where instruments of precision are required.

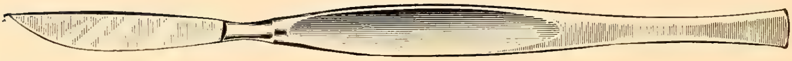
B quality scalpels are made of selected English steel, well tempered, ground to full concavity and well finished; are designed to meet the requirements of general laboratory dissection, where a perfect cutting edge is essential.

C quality scalpels are made of selected steel, carefully tempered and ground to a semi-concavity; recommended for student use in ordinary dissection; equal to any purpose where an extra fine edge is not required.

All scalpels bear the letter designating their quality.



12480-12505 and 12530-12554



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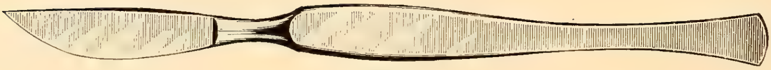


12556-65

Scalpels—Dissecting, A Quality. With ebony handle.

Cat. No.	Cutting Edge, mm	Style	Each
12480	35	A	1.00
12482	35	B	1.00
12485	35	C	1.00
12487	10	D	1.00
12490	50	E	1.00
12492	50	F	1.00
12495	45	G	1.00
12497	38	H	1.00
12500	32	I	1.00
12502	24	J	1.00
12505	18	K	1.00

Scalpels—Dissecting, A Quality. All steel; easily cleaned and sterilized.

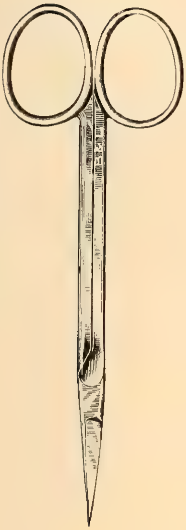
Cat. No.	Cutting Edge, mm	Each
12510	45	1.00
12515	38	1.00
12520	32	1.00
12525	25	1.00

Scalpels—Dissecting, B Quality. With ebony handle.

Cat. No.	Cutting Edge, mm	Style	Each
12530	35	A	.60
12533	35	B	.60
12536	35	C	.60
12539	10	D	.60
12542	50	E	.45
12544	50	F	.45
12546	46	G	.45
12548	38	H	.45
12550	32	I	.45
12552	25	J	.45
12554	18	K	.45

Scalpels—Dissecting, B Quality. All steel; easily cleaned and sterilized.

Cat. No.	Cutting Edge, mm	Each
12556	45	.70
12559	38	.70
12562	32	.70
12565	25	.70



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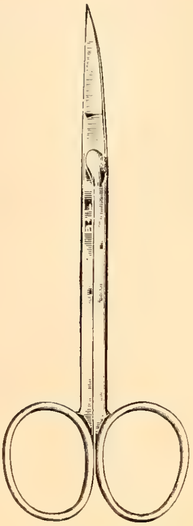

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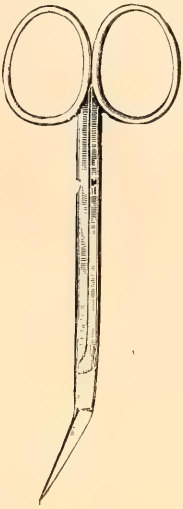

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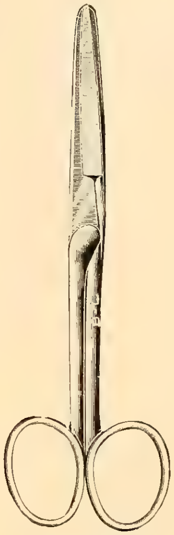

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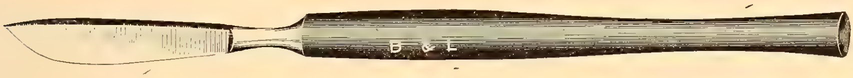


12585-94

Scalpels—Dissecting, C Quality. With ebony handle.

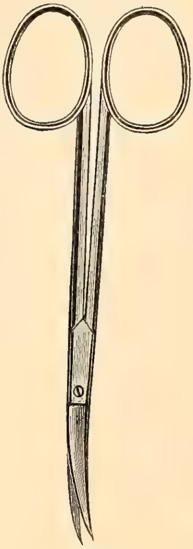
Cat. No.	Cutting Edge, mm	Each
12570	45	.30
12573	38	.30
12576	32	.30
12579	25	.30

Scalpels—Dissecting, C Quality. All steel; easily cleaned and sterilized.

Cat. No.	Cutting Edge, mm	Each
12585	45	.35
12588	38	.35
12591	32	.35
12594	25	.35

Scissors—Dissecting. Of steel, best quality, very finely finished; made with lock joint, which ensures firmness and allows the blades to be taken apart quickly for thorough cleaning and sterilization; the first three numbers below are suitable for the most delicate dissections; the last four are heavier scissors, for gross anatomical work.

Cat. No.	Description	Length, mm	Each
12600	Fine; straight	115	1.50
12603	Fine; curved	115	1.50
12605	Fine; bent	115	1.50
12607	Heavy; straight, one blunt blade	105	1.25
12610	Heavy; straight, one blunt blade	115	1.50
12613	Heavy; straight, one blunt blade	125	1.75
12615	Heavy; straight, both blades blunt	140	2.00



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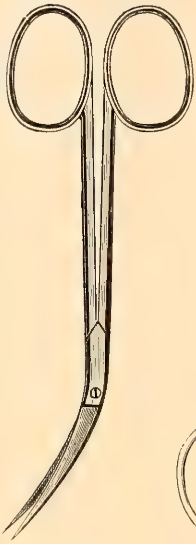

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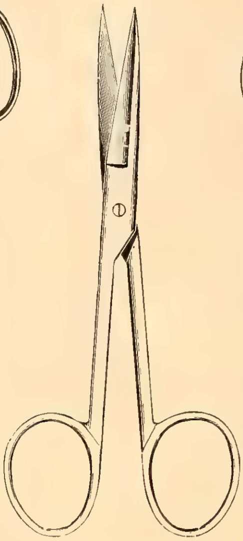

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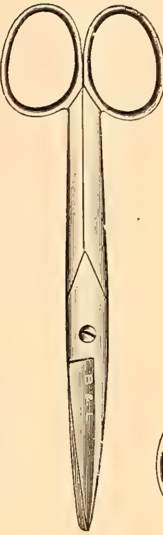

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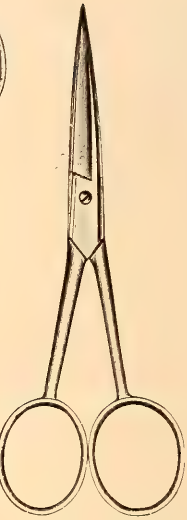

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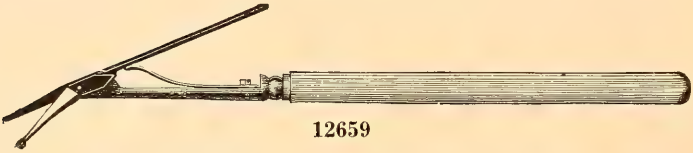


12659

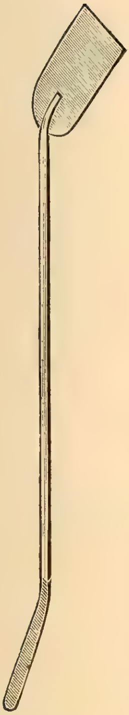
Scissors—Dissecting. Of steel, nickeled; best quality.

Cat. No.	Description	Length, mm	Each
12620	Fine; straight	115	1.10
12623	Fine; curved	115	1.10
12625	Fine; bent	115	1.40
12627	Medium; straight	115	1.20
12630	Medium; straight; one blunt point	115	1.20
12633	Heavy; straight	125	.80
12635	Heavy; straight; one blunt point	125	1.20
12637	Heavy; straight; one blunt point	140	1.40
12640	Heavy; straight; one blunt point	150	1.80
12643	Heavy; straight; anatomical	175	2.00

Scissors—Dissecting. Of steel.

Cat. No.	Description	Length, mm	Each
12650	Medium; straight; best quality	115	.80
12653	Medium; straight; good quality	115	.45

12659 **Scissors—Dissecting.** Very delicate and suited to the finest invertebrate dissecting; all metal parts nickel-plated; handles of genuine ivory; length of instrument, 140 mm; blades, 10 mm __________ Each **3.00**



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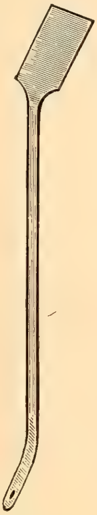

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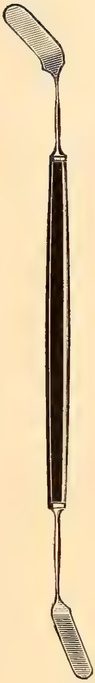

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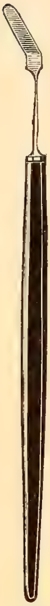

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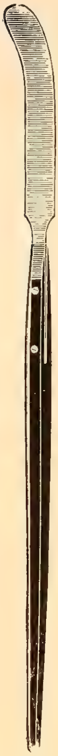

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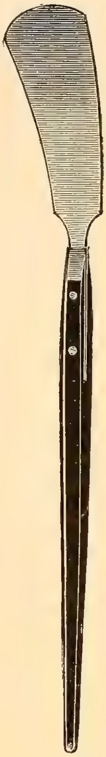

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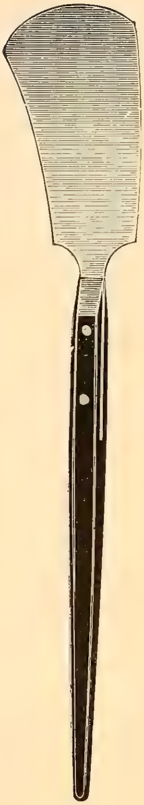

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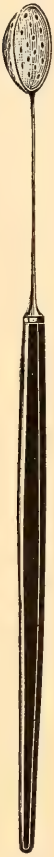

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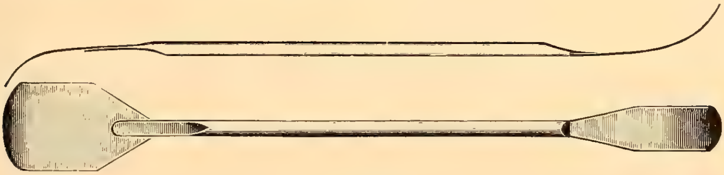
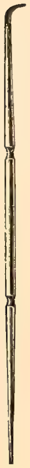


12665

Section Lifters. Nos. 12665 to 12670 are of metal throughout, nickel-plated; Nos. 12673 to 12685 have ebony handles; springs of Nos. 12678 to 12883 are of spring metal, nickel-plated, and are very thin and flexible; perforated lifter, No. 12685 is very useful for handling delicate specimens.

Cat. No.	Length, mm	Width of Blade, mm	Each
12665	200	11 and 22	.50
12668	160	5 and 22	.40
12670	100	18	.40
12673	135	6 and 10	.60
12675	130	6	.50
12678	147	10	.50
12680	147	20	.60
12883	157	35	.65
12685	165	18	.60



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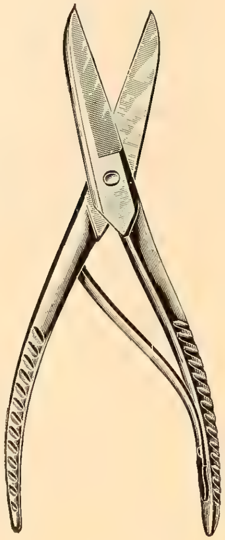

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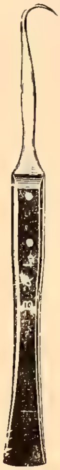

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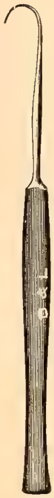

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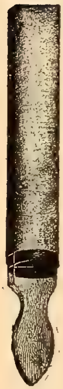

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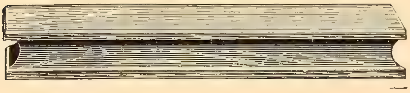

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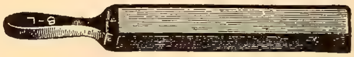


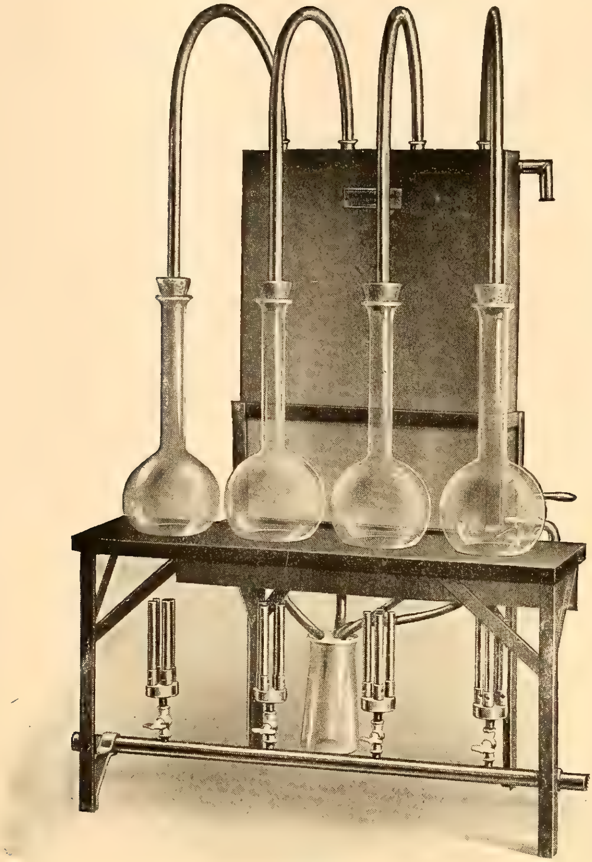
12710

12690	**Seeker.** Of nickeled steel; one end tapers to blunt point; curved end is sharply pointed and has inner, sharp edge; length, 150 mm____Each	.45
12695	**Shears—Cartilage.** Have short, knife-shaped blades, lock joint and corrugated handles with detachable spring between them to open the blades; made of steel, best quality, nickeled; length, 230 mm; blades, 60 mm ____Each	4.00
12700	**Strop.** Made of finest material to meet all requirements; consists of strip of finest leather perfectly blocked on a solid wood back; coarse; dimensions, 370 x 65 mm ____Each	3.00
12705	**Strop.** Same as No. 12700 above, but fine ____Each	3.00
12710	**Strop—Razor.** Four-sided; length, 350 mm ____Each	1.25
12715	**Strop—Razor, Emerson's** ____Each	1.50
12720	**Tenaculum.** Of steel; with sharp hook and ebony handle; length, 160 mm ____Each	.40
12725	**Tenaculum.** All steel; length, 160 mm ____Each	.70

Distilling apparatus for specific purposes are listed under:

"Nitrogen Determination Apparatus"
"Water Analysis Apparatus"
"Stills"

A special circular on water stills will be sent on application.



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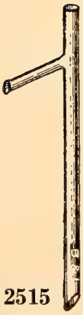

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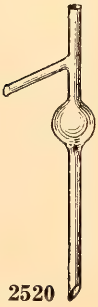

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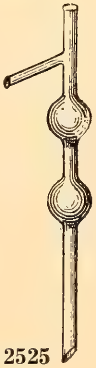
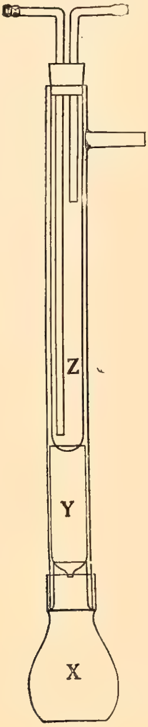


2525

12780	**Distilling Apparatus—Miller's.** For triple distilled water for colloidal gold solutions; by original method of construction the block tin tubes are adjustable, enabling operator to extend condensing coils as much below condensing chamber as desired; by using ordinary distilled water in the two left-hand bottles the accumulated double distilled water thus obtained may then be placed in the two right-hand bottles, and the resulting distillate is triple distilled as required; or, if desired, all four bottles may be used at once, by arrangement illustrated, so that all may be run into common beaker; without glassware	Each	72.00
2515	**Distilling Tube.** For fractional distillation; plain form	Each	.25
2520	**Distilling Tube.** With one bulb	Each	.40
2525	**Distilling Tube.** With two bulbs	Each	.50



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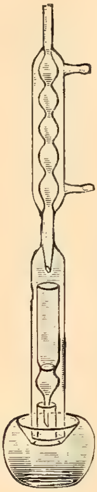

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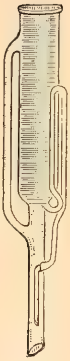

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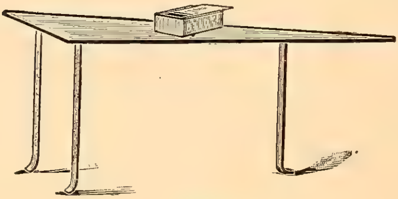


12790

12785 **Ear Tags.** Sweet's design; numbered 1 to 9999; staples included.

No.	A	B	C	D	E
Color	White	Red	Blue	Yellow	White
Material	Celluloid	Celluloid	Celluloid	Celluloid	Aluminum
Per hundred	**2.90**	**2.90**	**2.90**	**2.90**	**2.90**
Per five hundred	**13.00**	**13.00**	**13.00**	**13.00**	**13.00**
Per thousand	**19.50**	**19.50**	**19.50**	**19.50**	**19.50**

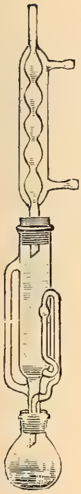
12790 **Embedding Table.** Designed for embedding objects in paraffin; consists of triangular plate, 40 cm long and 19 cm wide at large end; burner is placed under acute angle of plate, and heat is transmitted through the metal ---Each **4.00**

2625 **Extraction Apparatus—Ames'.** For fats; designed by J. W. Ames, of the Ohio Agricultural Station and described in the Journal of the American Chemical Society, August, 1909; consists of a flask, X (see illustration), a tube, Y, for holding the sample and a Hopkins' condenser, Z; the tube, which rests upon neck of flask, is sufficiently dented on three sides to allow the ether vapors to pass upward freely; the filtering medium may be cotton, on which small circles of filter paper are placed, the perforated plates being of aluminum; has no delicate parts, is not fragile and combines the desirable points of other apparatus; is used, in form illustrated, by the U. S. Government; complete ---Each **6.00**

2635 **Extraction Apparatus—Knorr's.** Complete with Condenser, Extraction Tube and Knorr Flask, 100 cc capacity, glass parts only, see U. S. Dept. of Agriculture Bureau of Chemistry circular No. 69, Walter and Goodrich Improvement in the Knorr Extraction Apparatus--Each **9.80**

2640 **Extraction Apparatus—Soxhlet's.** Of clear, white glass; extraction tube only.

No.	A	B	C	D
Approx. capacity to top of syphon, cc	70	100	150	200
Approx. diameter of tube, mm	30	38	42	50
Each	**1.80**	**2.40**	**3.00**	**3.50**



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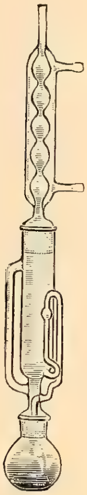

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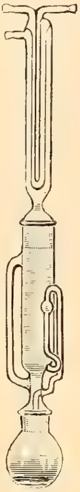

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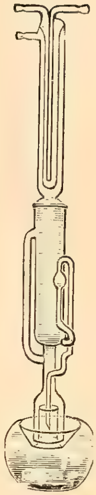

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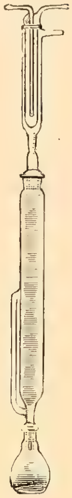

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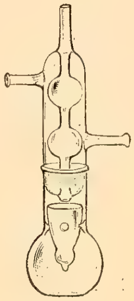


2670

2645 **Extraction Apparatus—Soxhlet's.** Complete with flask and condenser; fitted with best quality corks.

No.	A	B	C	D
Approx. diameter of tube, mm	30	38	42	50
Approx. capacity to top of syphon, cc	70	100	150	200
Each	4.90	5.25	6.00	6.75

2650 **Extraction Apparatus—Soxhlet's.** With all joints ground air-tight; complete with three flasks and condenser.

No.	A	B	C
Approx. diameter of tube, mm	30	38	50
Approx. capacity to top of syphon, cc	100	150	200
Each	6.70	7.50	9.00

2655 **Extraction Apparatus—Soxhlet's.** Same as No. 2650 above, but fitted with Hopkins' condenser instead of Allihn's bulb condenser.

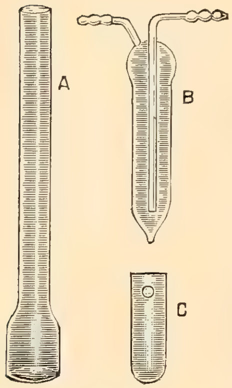
No.	A	B	C
Diameter of Soxhlet's tube, mm	30	38	50
Capacity, cc	60	100	200
Each	7.50	8.25	9.75

2660 **Extraction Apparatus—Soxhlet's.** Consists of Soxhlet Tube, 38 mm inside diameter, Hopkins' Condenser and Knorr's flasks; 100 cc for mercury seal; joint between condenser and extraction tube is ground air-tight -- Each 9.00

2665 **Extraction Apparatus—Ringer's.** With Hopkins' Condenser and special extraction apparatus, well suited for continuous extraction from liquid media; all joints ground air-tight; inside diameter of extraction tube, 38 mm; length, 37 cm; complete with three flasks ground to fit -- Each 12.00

2670 **Extraction Apparatus—Thorn's** With ground joint condenser.

No	A	B	C
Height, mm	180	240	330
Diameter, mm	30	40	55
Each	2.00	2.25	3.00



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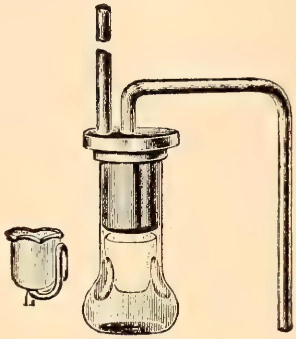

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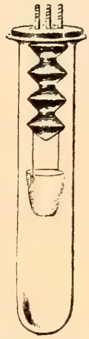

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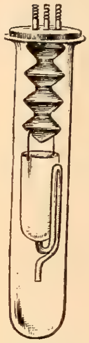
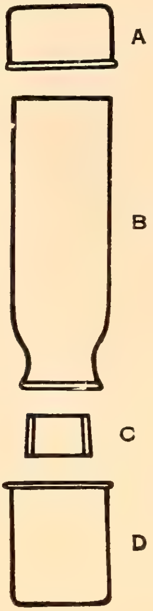


2690

2675	**Extraction Apparatus.** As used in the Food Laboratories, Bureau of Chemistry, U. S. Department of Agriculture. Consists of cylinder, condenser and glass thimble. Outfit complete	Each	5.30
	A. A cylinder for above, 20½ inches long, 2 inches diameter, except at its lowest or sealed end, which is enlarged to a diameter of 3 inches for a length of 4 inches	Each	2.30
	B. Condenser for above, 1¾ inches diameter, except at its upper end, which is enlarged to a bulb 2½ inches in diameter to permit its suspension in "A"	Each	2.25
	C. Thimbles for above, 6 inches long and 1½ inches in diameter, perforated ¼-inch from top, with two ¼-holes placed opposite each other; capacity, 100 cc with straight upper rim	Each	.75
2680	**Extraction Apparatus—Bailey-Walker's.** Consisting of a metal condenser, small glass flask of special shape, and a small glass syphon cup. This is one of the most compact forms of extraction apparatus and can be used for any kind of work. The flask is light and can be accurately weighed and easily cleaned. Made according to design of Bailey and Walker, of the Bureau of Chemistry, U. S. Dept. of Agriculture. (See Journal of Industrial & Engineering Chemistry, Vol. VI, No. 6, for June, 1914, p. 497)	Each	5.00
	Extra Metal Condenser	Each	3.50
	Extra Syphon Cup	Each	.65
	Extra Gooch Crucible	Each	.40
	Extra Flask	Each	.60
2685	**Extraction Apparatus—Wiley's.** Consists of glass tube with ground flange, containing a metal condenser and suspended porcelain Gooch crucible; no stoppers of any kind are required; permits double weighing, both of residue and extracted matter	Each	6.50
	Extra Condenser	Each	5.35
	Extra Tube	Each	.75
	Extra Gooch Crucible	Each	.40
2690	**Extraction Apparatus—Wiley-Richardson.** A simple form, recommended where a great deal of work is to be done on fats, oils, gums and resins; combines the simplicity and efficiency of the original Wiley apparatus with the maceration and percolation method of washing, as in the regular Soxhlet apparatus; complete with glass syphon cup, but without extraction thimbles	Each	7.00
	Extra Condenser	Each	5.25
	Extra Syphon Cup	Each	1.00
	Extra Tube	Each	.75



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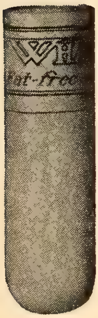


12835

2710

2705 **Extraction and Weighing Tube—Bain and Hampton's.** New and simple device, in which the sample is weighed and dried directly in the filter tube, thus dispensing with any further handling of the sample and the use of extraction thimbles; consists of four parts (see illustration): A—upper cap; B—tube; C—cone, and D—lower cap; can be placed in any type of extraction apparatus except that of Soxhlet; by proper regulation of heat, the rate of distillation of ether may be so adjuster as to keep the sample covered to any desired depth by the ether; joint formed by cone C is perfect, and extract passes through clearer than in the ordinary extraction thimbles; caps A and D are ground on tube B; length of tube over all, 90 mm; diameter of caps, outside, 27 mm; complete ....Each 2.25

12825 **Extraction Thimbles—Alundum.** Round bottom; easily cleaned by ignition; can be used repeatedly.

No	A	B	C
Length, mm	127	100	32
Diameter, mm	45	34	6
Each	**1.00**	**.90**	**.25**

12830 **Extraction Thimbles—Alundum.** Same as above No. 12825, but with flat bottom.

No.	A	B	C	D
Length, mm	90	80	70	55
Diameter, mm	19	30	25	35
Each	**.60**	**.75**	**.90**	**.80**

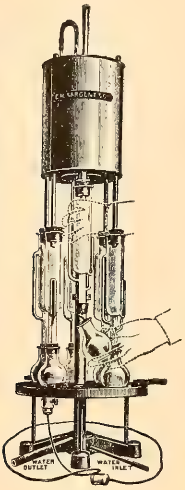
12835 **Extraction Thimbles—Whatman's.** Made from the same high-grade material as Whatman's filter papers and rendered fat-free by a special process; absolutely seamless; can be used repeatedly.

No.	A	B	C	D	E
Size, mm	10 x 50	19 x 90	22 x 80	25 x 80	25 x 100
Per box of 25 Single thickness	**3.15**	**3.15**	**3.15**	**3.55**	**4.40**
Per box of 25 Double thickness	**5.28**	**5.28**	**5.28**	**5.92**	**7.36**

No.	F	G	H	I
Size, mm	26 x 60	33 x 80	33 x 94	43 x 123
Per box of 25 Single thickness	**3.15**	**3.55**	**4.40**	**7.10**
Per box of 25 Double thickness	**5.28**	**5.92**	**7.36**	**11.84**

2710 **Extraction Thimbles.** Of glass; round bottom, with perforations.

No	A	B	C
Height, mm	80	80	123
Diameter, mm	25	33	43
Each	**.50**	**.75**	**1.10**



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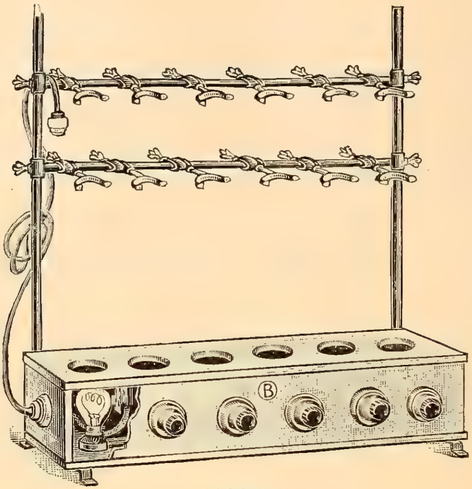
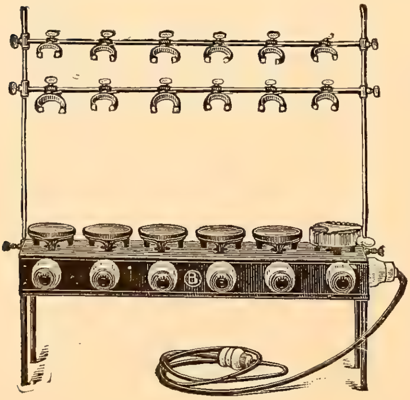


12810

12805	**Extraction Apparatus.** Electrically heated; revolving type; accommodates glassware of any style or size; sliding condensing tubes obviate necessity for moving corks when once placed; no valves or washers; adjustable in height; only requires about one square foot of space and may be set up in any corner; no rubber tubing or clamps at condensers; only one connection at water inlet and outlet necessary; furnished for either 110 or 220-volt, direct or alternating current; supplied without glassware ________________________Each **(Please specify voltage and current in ordering.)**	55.00
12810	**Extraction Apparatus Heater.** Has set of six electric lamps, each with switch, encased in enclosed support made of asbestos wood, 30 inches long, 5½ inches wide and 7 inches in diameter; iron uprights have an extreme height of 31 inches; horizontal rods are adjustable in height; provided with six sets of adjustable clamps for extractors and condensers ________________________Each	60.00



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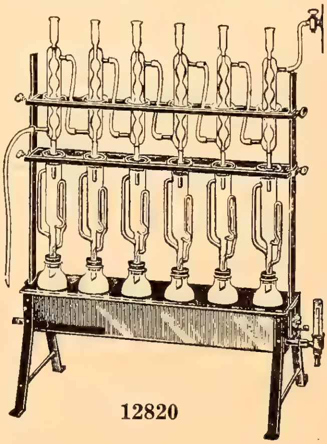
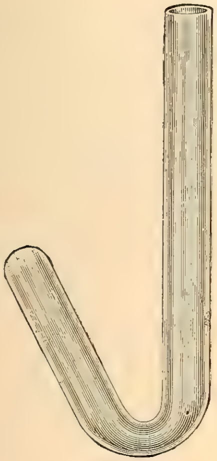


12820

12815	**Extraction Apparatus Heater.** Consists of base with six separate electric heaters, each one provided with switch and uprights with two adjustable cross-arms; provided with six sets of clamps____Each **(Please state voltage and current when ordering.)**	90.00
12820	**Extraction Apparatus Heater.** Water bath is of heavy polished copper, tinned inside, 23 in. long, 4 in. deep and 4½ in. wide, with 6 holes 2½ in. in diameter, on legs 7 in. high; extreme height,, including rods, is 31 in., the racks being adjustable; can be heated by gas or hot water; without glassware or burner__________________Each	27.00



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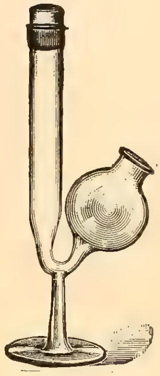


12860

12840 **Fermentation Tubes.** Without bulb, fish hook form; height of vertical tube, 100 mm; outside diameter of tube, 12 to 13 mm ____________ Each .15

12845 **Fermentation Tubes.** With bulb but without foot; ungraduated.

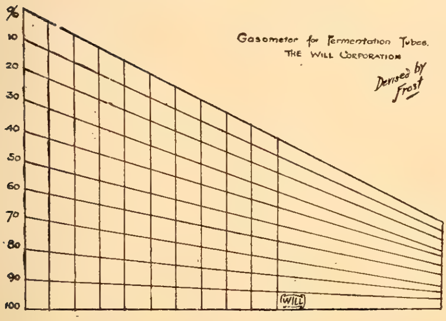
No	A	B	C
Length, mm	115	140	165
Diameter, mm	13	15	17
Each	.15	.25	.30

12850 **Fermentation Tubes.** On foot; ungraduated.

No	A	B	C
Length, mm	145	170	195
Diameter, mm	13	15	17
Each	.30	.35	.40

12855 **Fermentation Tube.** On foot; graduated; medium size ____________ Each .60

12860 **Fermentation Tube—Hills'.** Designed by Dr. H. W. Hills, of Boston, Mass.; has open top with ground-glass stopper, which permits thorough cleaning of tube; capacity of bulb, 50 cc; capacity of tube, 25 cc ____________ Each .65



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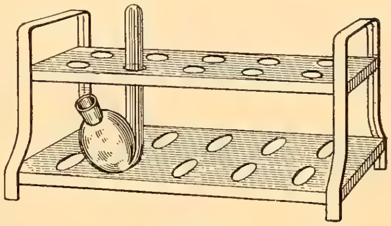


12865

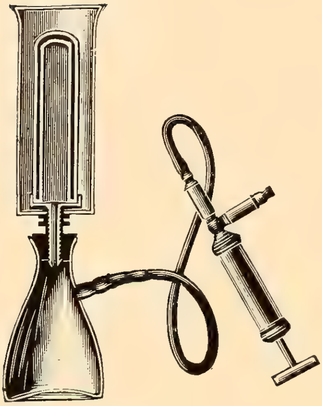
12862 **Fermentation Tube Gauge.** A gauge for the estimation of CO_2 and H_2 gases formed in the closed arm of Fermentation Tubes. Printed on durable, heavy cardboard ____________ Each .25

12865 **Fermentation Tube Racks.** Made of polished copper; dimensions, 11 in. long x 5 in. wide.

No.	A	B
Capacity, tubes	10	12
Each	2.90	3.20

12875

12880



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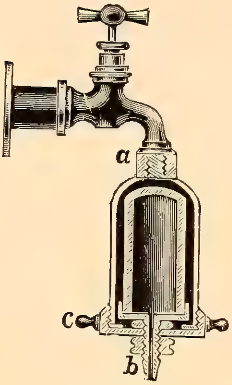

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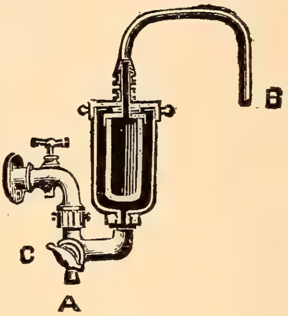


12898

12870 **Files—Flat.** Best quality.

No.	A	B	C	D	E	F
Length, mm	75	100	125	150	175	200
Each	.25	.25	.30	.40	.65	.90

12875 **Files—Round** (Rat tail). Best quality.

No.	A	B	C	D	E	F
Length, mm	75	100	125	150	175	200
Each	.13	.17	.19	.22	.24	.26

12880 **Files—Triangular.** For cutting glass tubing; best quality.

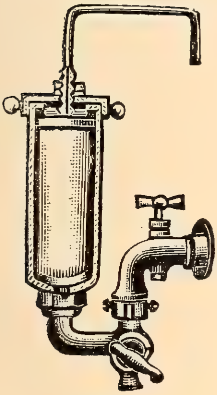
No.	A	B	C	D	E	F
Length, mm	75	100	125	150	175	200
Each	.12	.13	.14	.16	.20	.27

12885	**File Handle.** Best quality	Each	.06
		Per dozen	.65

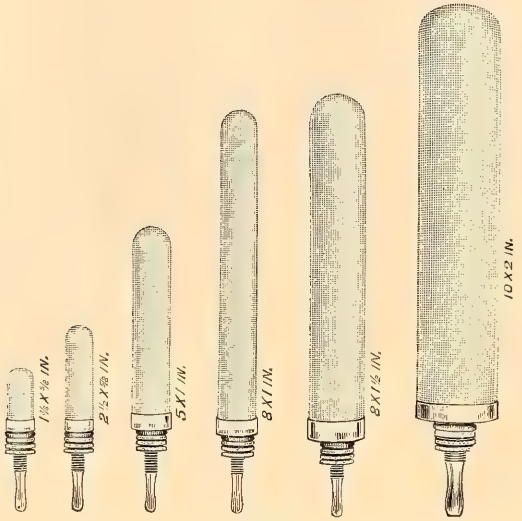
12895 **Filters—Berkefeld Medical or Laboratory.** For use where liquids are to be sterilized, or infusions or antitoxins are to be made; yield a clear, sterile blood serum and eliminate all fat from milk so as to make a perfectly clear milk serum; mantle and cylinder are included, without flask or pump.

No.	A	B	C
Size of cylinder, in.	2½ x ⅝	8 x 1	10 x 2
Each	4.00	6.50	8.00

	Extra: Exhaust Pump for the above	Each	7.00
12897	**Filter—Berkefeld.** Nickel-plated; capacity, about 1 gallon in 4 minutes at 40 pounds pressure; height, 165 mm; diameter, 70 mm; filtration downward	Each	5.50
	Renewal Filtering Cylinder	Each	1.75
	Two-way Stopcock	Each	2.00
	Wrench	Each	.50
12898	**Filter—Berkefeld.** Similar to No. 12897, but for upward filtration	Each	8.00
	Renewal Filtering Cylinder	Each	1.75
	Wrench	Each	.50



12900-02


1⅜ X ⅝ IN.
2½ X ⅝ IN.
5 X 1 IN.
8 X 1 IN.
8 X 1½ IN.
10 X 2 IN.

12905

12900 **Filter—Berkefeld.** Nickel-plated; capacity, about ¾ gallon in 2 minutes at 40 pounds pressure; height, 230 mm; diameter, 70 mm;

for upward filtration	Each	11.50
Renewal Filtering Cylinder	Each	2.50
Wrench	Each	.50

12902 **Filter—Berkefeld.** Nickel-plated; capacity, about 1 gallon in 2 minutes at 40 pounds pressure; height, 290 mm; diameter, 70 mm;

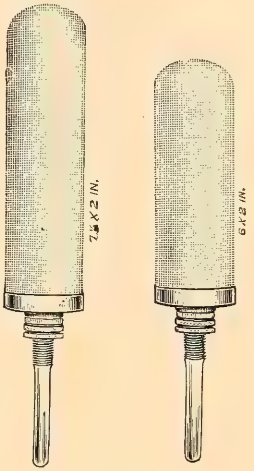
for upward filtration	Each	13.50
Renewal Filtering Cylinder	Each	3.00
Wrench	Each	.50

12905 **Filter Cylinders—Mandler Diatomaceous.** With metallic headpiece of heavy brass, nickel-plated, fitted with lock nut, two rubber washers and one fibre washer as required for use in glass mantles, etc., on negative pressure; where cylinders are used on positive pressure, the flat rubber washer and fibre washers are, of course, unnecessary.

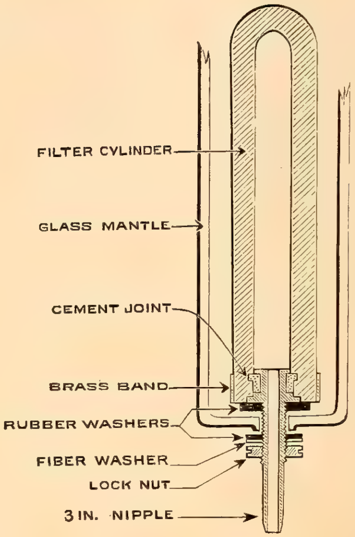
	No. A	**B**	**C**
Size, in	1⅜ x ⅝	2½ x ⅝	5 x 1
Length of nipple, in.	2	2	2
Diam. of nipple, in	5/16	5/16	5/16
No. in original case	144	144	72
Each	**1.15**	**1.25**	**2.50**
Per dozen in orig. case	**12.42**	**13.50**	**27.00**

	No. D	**E**	**F**
Size, in.	8 x 1	8 x 1½	10 x 2
Length of nipple, in	2	2	2½
Diam. of nipple, in.	5/16	5/16	½
No. in original case	72	48	24
Each	**$3.00**	**3.15**	**3.50**
Per doz. in orig. case lots	**32.40**	**34.02**	**37.80**

12910


7½ X 2 IN.
6 X 2 IN.

12915



12925

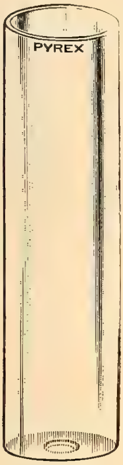
12910 **Filter Cylinder—Mandler Diatomaceous.** With glazed, porcelain headpiece and nipple, for filtering acids, etc.; furnished in one size only, 10 x 2 in .... Each **3.50**
Per dozen in original case of 24 cylinders **37.80**

12915 **Filter Cylinders—Mandler Diatomaceous.** With metallic headpiece and especially long nipple; furnished with lock nut, two rubber washers and two fibre washers.

	No. A	B
Size, in.	6 x 2	7½ x 2
Length of nipple, in.	3⅞	3⅞
Diam. of nipple, in.	½	½
No. in original case	30	24
Each	**3.00**	**3.15**
Per doz. in orig. case lots	**32.40**	**34.02**

12920 **Filter Cylinder—Mandler Diatomaceous** (Preliminary Filter). Consists of cylinder, 10 x 2 in., with walls of regular thickness, of a tested porosity ranging under 8 lbs. (usually about 4 to 6 lbs.); largely used by manufacturers of biological products as a preliminary filter, after which a second filtration is carried out; preliminary filtration through this low pressure cylinder quickly removes albuminous material, which tends to slow up the finer or higher pressure filters .... Each **3.50**
Per dozen in original case of 24 cylinders **37.80**

12925 **Filter Cylinder—Mandler Diatomaceous.** Consists of cylinder, 10 x 2 in., with inset headpiece and nipple 3 in. long x ½ in. diameter; furnished with lock nut, small rubber washer, small fibre washer and large, soft rubber washer; with this type of headpiece rubber washer comes in direct contact with diatomaceous cylinder, and care must be taken not to tighten lock nut too much, or cylinder will be forced off headpiece; for this reason most laboratories prefer regular type of headpiece, as used on No. 12905; furnished in one size only .... Each **3.50**
Per dozen in original case of 24 cylinders **37.80**



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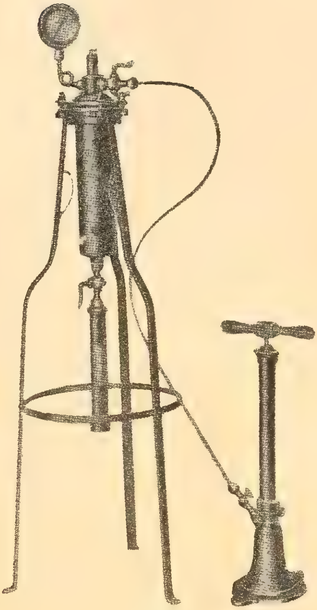

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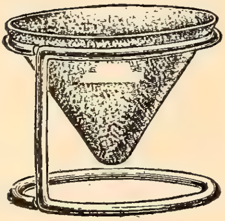
12930 **Glass Mantles—Pyrex.** For use with any of the Mandler Diatomaceous Filter Cylinders above; Pyrex glass is especially advantageous for this purpose, because of its low solubility, resistance to heat shock and great mechanical strength.

No.	A	B	C
Size, in. (outside)	2½ x 1¼	4¼ x 1¼	5⅝ x 2¾
Diam., in. (inside)	7/16	3/8	5/8
Each	.50	.75	1.00

No.	D	E
Size, in. (outside)	11 x 2¾	13⅜ x 4⅜
Diam., in. (inside)	9/16	3/4
Each	1.25	1.75

12932	**Filtering Apparatus for Serum.** For pressure filtration; consists of cast-iron reservoir, enameled inside, with filter chamber attached, containing porous tube or bougie; stopcock is provided in connecting tube between reservoir and filter chamber; dimensions of reservoir, 3⅜ in. in diameter x 12 in. deep; height of apparatus over all, 46 in.; floor space occupied, 18 x 18 in.; furnished complete, with pressure gauge, pump, connecting tubing, and stand ____________________Each	120.00
2715	**Filter Apparatus.** Consists of glass plate and open top bell glass, fitted with rubber stopper and funnel; without beaker_________Each	3.00
5915	**Filters—Porous.** Of Coors porcelain; tube-shape, closed on one end, with flange on other end; diameter of tube, 20 mm; diameter of flange, 50 mm; inside diameter, 16 mm; length, 115 mm_________Each	.96
5920	**Filter—Porous.** Of Coors porcelain; 125 x 200 mm _____________Each	1.98



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12935 **Filter Cones—Of Alundum.** Used for separating precipitates from solutions by means of suction and can be used in any 60° funnel by stretching wide band of rubber tubing over funnel.

No.	A	B	C	D
Diameter, in.	1¾	2½	3	4½
Capacity, cc	20	50	60	100
Each	.30	.60	.85	1.50

5770 **Filter Cones.** Of Coors porcelain; glazed, with exception of rim, with holes of about 1 mm diameter.

Size No.	3	4
Diameter, mm	50	63
Height, mm	43	62
Each	1.08	1.32

12940 **Filter Paper—Will, White.** Circular filters; put up in packages of 100 filters and found by test to be equal to higher priced papers.

No.	A	B	C	D	E	F
Diameter, mm	55	70	90	110	125	150
Per hundred	.11	.12	.15	.18	.22	.30

	G	H	I	J	K
Diameter, mm	185	240	270	320	385
Per hundred	.46	.75	1.05	1.20	1.55

12945 **Filter Paper—Will, White.** In sheets, 480 x 480 mm______Per hundred 2.50

12950 **Filter Paper—Will, Gray.** Circular filters; tough and durable.

No.	A	B	C	D	E	F	G
Diameter, mm	150	190	250	330	400	450	500
Per hundred	.40	.60	.90	1.40	1.80	2.50	3.25

12955 **Filter Paper—Will, Gray.** In sheets, 500 x 500 mm_______Per hundred 3.00

12960 **Filter Paper.** Of medium texture, heavy, strong and rapid; has creped surface; very popular, especially in the large sizes, among manufacturers of pharmaceuticals, extracts, essences, chemicals, biologicals, perfumes, etc., also for filtering soap solutions, oils and the like, and for other purposes where a retentive paper is necessary.

No.	A	B	C	D	E	F	G	H	I
Diameter, mm	90	110	130	150	200	250	330	400	450
Package of 100	.15	.18	.22	.30	.46	.75	1.20	1.55	2.20

No.	J	K	L	M	N	O	P	Q
Diameter, mm	500	600	650	700	750	1000	1150	1250
Package of 100	2.65	3.80	4.40	5.10	6.00	11.50	14.50	17.90

12965 **Filter Paper.** Same as No. 12960 above, but in sheets, 500 x 500 mm; furnished in reams of 500 sheets________________________Per ream 12.60

12970 **Filter Paper.** Same as No. 12960, but in sheets, 600 x 600 m; in reams of 500 sheets ___________________________________Per ream 18.35

J.H. MUNKTELL'S UNRIVALLED GENUINE SWEDISH FILTERING PAPER
RECOMMENDED BY THE MOST CLEVER CHEMISTS
BERZELIUS CONSIDERED IT THE BEST IN THE WORLD
No 0
7 Cm
EACH BOX CONTAINING 500 FILTERS
THE ASHES OF EACH FILTER 0.00018 GR.
EXTRACTED BY HYDROCHLORIC ACID.

12975 **Filter Paper—Munktell's, No. 1F.** Original Swedish product; of best linen material, most perfect filtering paper made; leaves one-third less ash than the smallest amount of any former unwashed paper; very strong and adapted to highest class of chemical work; finest precipitates are retained; circular; furnished 100 in a package.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	.33	.48	.75	.90	1.20	1.50	2.25

12980 **Filter Paper—Munktell's, No. 1F.** Same quality as No. 12975 above, but furnished in full sheets, 48 x 48 cm______Per ream of 480 sheets **60.00**
Per quire of 24 sheets **3.60**

12985 **Filter Paper—Munktell's, No. 2.** Original Swedish product; pure, white linen paper of medium thickness, not so closely made and therefore more rapid in filtration; a superior paper for all laboratory work; circular, furnished 100 in a package.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	.30	.39	.60	.78	.93	1.20	1.59

12990 **Filter Paper—Munktell's, No. 2.** Same quality as No. 12985 above, but furnished in full sheets, 48 x 48 cm__________Per ream of 480 sheets **51.00**
Per quire of 24 sheets **3.00**

12995 **Filter Paper—Munktell's, No. 3.** Original Swedish product; a pure white paper of superior quality at less cost than any other paper of same quality and weight; heavier than No. 2 above; filters rapidly; circular, furnished 100 in a package.

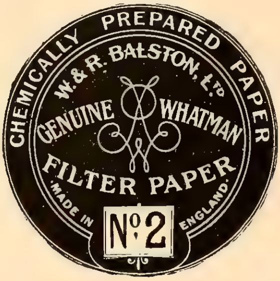
No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	.24	.30	.45	.54	.72	.96	1.23

13000 **Filter Paper—Munktell's, No. 3.** Same quality as No. 12995 above, but furnished in full sheets, 48 x 48 cm__________Per ream of 480 sheets **42.00**
Per quire of 24 sheets **2.40**

13005 **Filter Paper—Munktell's No. 100.** Original Swedish product, extra heavy; meets need for a heavier and stronger filter for certain solutions; of same quality as the Munktell papers above, filters rapidly and will retain the finest precipitates; circular, furnished 100 in a package.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	.33	.42	.63	.81	.99	1.29	1.65

13010 **Filter Paper—Munktell's No. 100.** Same quality as No. 13005 above, but furnished in full sheets, 48 x 48 cm______Per ream of 480 sheets **60.00**
Per quire of 24 sheets **3.60**



13015 **Filter Paper—Whatmen's No. 1.** High-grade filter paper for general students' qualitative work and for filtering ordinary precipitates in industrial laboratories, when ash weight of paper is of no consequence; widely used for determination of phosphorous, for filtration of yellow ammonium-phospho-molybdate precipitate when obtained by long digestion, as in fertilizer analysis; also popular grade for general work in sugar laboratories; circular, furnished 100 in sealed box.

No.	A	B	C	D	E	F	G
Diameter, mm	42.5	55	70	90	110	125	150
Per hundred	**.16**	**.17**	**.20**	**.24**	**.28**	**.37**	**.51**
No.	**H**	**I**	**J**	**K**	**L**	**M**	**N**
Diameter, mm	185	240	270	320	385	400	500
Per hundred	**.71**	**1.25**	**1.48**	**2.30**	**2.76**	**3.13**	**4.40**

13020 **Filter Paper—Whatman's No. 1.** Same quality as No. 13015 above, but furnished in sheets, 46.5 x 57 cm________Per ream of 480 sheets **20.25**
Per 100 sheets **4.45**

13025 **Filter Paper—Whatman's No. 2.** Similar to No. 1, but stouter; retains fine precipitates and filters rapidly; standard grade for analytical purposes, as in qualitative analysis of alkaline earths and in other analyses where fine precipitates of crystalline nature are encountered; extensively used in fertilizer, cement, and biological laboratories; circular, furnished 100 in sealed box.

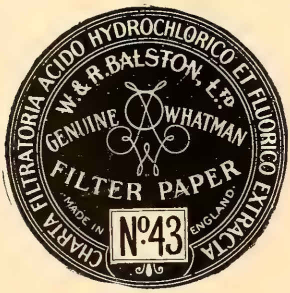
No.	A	B	C	D	E	F	G
Diameter, mm	42.5	55	70	90	110	125	150
Per hundred	**.20**	**.21**	**.27**	**.34**	**.42**	**.52**	**.74**
No.	**H**	**I**	**J**	**K**	**L**	**M**	**N**
Diameter, mm	185	240	270	320	385	400	500
Per hundred	**1.04**	**1.78**	**2.16**	**3.30**	**4.00**	**4.55**	**6.00**

13030 **Filter Paper—Whatman's No. 2.** Same quality as No. 13025 above, but furnished in sheets.

No.	A	B
Size, cm	46.5 x 57	28.5 x 58.5
Per ream of 480 sheets	**31.10**	**40.00**
Per 100 sheets	**6.85**	**8.80**

13035 **Filter Paper—Whatman's No. 3.** Stout, strong paper for general qualitative work; slightly slower than No. 2, but very retentive; will withstand considerable washing; especially suited for filtering such fine precipitates as metastannic acid, properly precipitated calcium oxalate, ammonium phospho-molybdate, when rapidly precipitated by mechanical shaker, as in iron and steel laboratories, etc.; valuable for use in recovery of small quantities of silver from solution, giving an excellent separation if not too great an excess of the chloride precipitating salt is present; circular, furnished 100 in sealed box.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	**.34**	**.40**	**.50**	**.57**	**.74**	**1.04**	**1.48**
No.	**H**	**I**	**J**	**K**	**L**	**M**	
Diameter, mm	240	270	320	385	400	500	
Per hundred	**2.53**	**3.10**	**4.70**	**5.70**	**6.50**	**8.60**	



13040 **Filter Paper—Whatman's No. 3.** Same quality as No. 13035 above, but furnished in full sheets, 46.5 x 57 cm____Per ream of 480 sheets 46.40
Per 100 sheets 10.20

13045 **Filter Paper—Whatman's No. 4.** Soft paper of more open texture than Nos. 1, 2 or 3; extremely rapid, but not recommended for use with finest precipitates, for which purpose Nos. 2 or 3 should be employed; suited for very rapid and perfect filtration of gelatinous and large-particle precipitates, such as ferric hydroxide, aluminum hydroxide, etc.; for pharmaceutical purposes, filtering fruit juices, syrups, oils, etc.; very popular in copper and other ore mining, sugar and cement laboratories; circular, furnished 100 in sealed box.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	**.27**	**.30**	**.40**	**.50**	**.65**	**.90**	**1.30**

No.	H	I	J	K	L	M
Diameter, mm	240	270	320	385	400	500
Per hundred	**2.22**	**2.70**	**4.10**	**4.95**	**5.70**	**7.50**

13050 **Filter Paper—Whatman's No. 4.** Same quality as No. 13045 above, but furnished in full sheets, 46.5 x 57 cm_____Per ream of 480 sheets 39.90
Per 100 sheets 8.75

13055 **Filter Paper—Whatman's No. 5.** Very tough, hard paper, close in texture; will retain the finest precipitates, such as barium sulphate and lead sulphate, even when freshly precipitated; particularly adapted for use with solutions that are filtered with difficulty; slow filtering with cold solutions, but surprisingly rapid with hot solutions, considering its retentiveness; suitable for vacuum filtrations with Buchner funnel, etc.; circular, furnished 100 in sealed box.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	**.20**	**.27**	**.34**	**.41**	**.54**	**.75**	**1.11**

No.	H	I	J	K	L	M
Diameter, mm	240	270	320	385	400	500
Per hundred	**1.78**	**2.17**	**3.35**	**4.00**	**4.60**	**6.00**

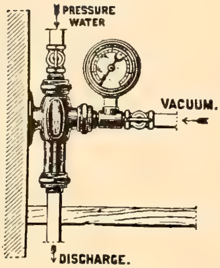
13060 **Filter Paper—Whatman's No. 5.** Same quality as No. 13055 above, but furnished in full sheets, 46.5 x 57 cm______Per ream of 480 sheets 31.50
Per hundred sheets 6.95

13065 **Filter Paper—Whatman's No. 40.** Double acid-washed; all traces of silicious matter extracted by treatment with hydrochloric and hydrofluoric acids; very low ash; filters rapidly and retains fine precipitates.

No.	A	B	C	D	E	F	G
Diameter, mm	55	70	90	110	125	150	185
Per hundred	**1.10**	**1.20**	**1.70**	**2.00**	**2.30**	**2.70**	**3.60**

13070 **Filter Paper—Whatman's No. 43 ("Ashless").** Double-acid-washed, having been subjected to treatment by hydrochloric and hydrofluoric acids to extract all traces of silicious matter, also to additional chemical process which renders it fat-free; very low ash; filters rapidly and retains fine precipitates; suitable for the recovery of the ether extract in the Roese-Gottlieb fat test, and for other purposes where the advantages of a fat-free paper are obvious; circular, furnished 100 in sealed box.

No.	A	B	C	D	E	F
Diameter, mm	55	70	90	110	125	150
Per hundred	**1.35**	**1.50**	**2.20**	**2.55**	**2.80**	**3.60**



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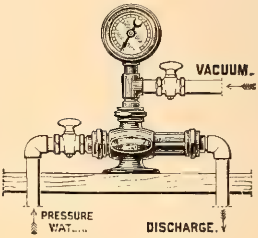

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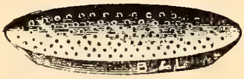


5775-80

13075 **Filter Paper—Whatman's No. 50.** Specially hardened by treatment with nitric acid; very tough, resisting great pressure and retaining even finest precipitates; can be used repeatedly, hard, smooth surface permitting precipitates to be scraped or washed off without injury to paper; especially adapted for use with vacuum.

No.	A	B	C	D	E	F	G
Diameter, mm	42.5	55	70	90	110	125	150
Per hundred	.55	.90	1.20	1.70	2.00	2.30	2.70

No.	H	I	J	K	L	M	N
Diameter, mm	185	240	270	320	385	400	500
Per hundred	3.60	6.10	7.30	11.35	13.75	15.75	20.85

5775 **Filter Plates.** Of Coors porcelain; perforated disks for Caldwell crucibles and funnels; sizes Nos. 6 to 9 have beveled edges.

Size No.	1	2	3	4	5
Diameter rim, mm	15	20	22	25	30
Thickness, mm	1½	1½	1½	1½	1½
Each	.20	.23	.24	.24	.28

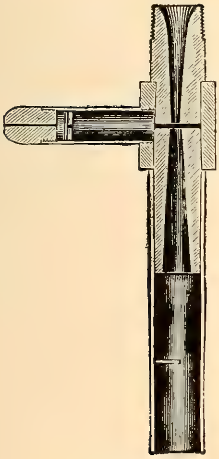
Size No.	6	7	8	9
Diameter rim, mm	38	50	60	75
Thickness, mm	4	4	4	4
Each	.36	.46	.54	.72

5780 **Filter Plates.** Of Ohio porcelain, Hirsch; profusely perforated; edges beveled to fit 60° funnels.

Size No.	1	2	3
Diameter, mm	25	38	50
Each	.20	.25	.30

13080 **Filter Pump—Water-Jet.** Also provides vacuum for percolation, evaporation, distillation, etc.; with 20 lbs. water pressure it will displace 1/3 cu. ft. of air per minute at atmospheric pressure; furnished with gauge, connecting tee, and 2 cocks________________Each **22.50**

13085 **Filter Pump—Steam-Jet.** Similar to No. 13080 above, but made to operate with steam instead of water; furnished with gauge, connecting tee, stop and check valve______________________________Each **22.50**



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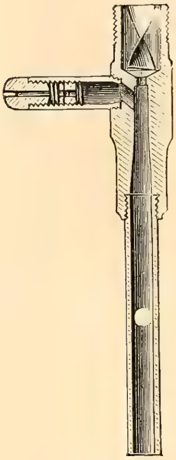

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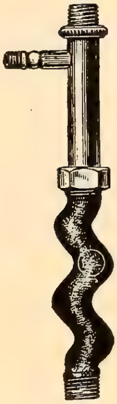

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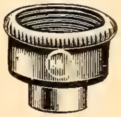


A

B

13090 **Filter Pump—Chapman's.** Made of brass and operated under ordinary water pressure; a very powerful pump.

Numbers	1	2	3
Each	1.40	1.60	1.80

13095 **Filter Pump—Chapman's, Couplings for.** When ordering, state size of pump for which coupling is desired.

No. A.	For threaded faucet	Each	.35
No. B.	For smooth faucet	Each	.60

13100 **Filter Pumps.** Constructed on entirely new design, to produce a higher vacuum in less time and using one-third less water than any other pump made.

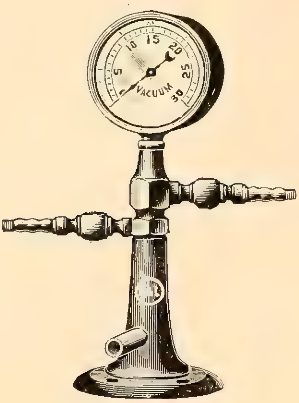
No.	A	B	C
Size	Small	Medium	Large
Each	1.40	1.60	1.80

13105 **Filter Pump—Richard's.** Made of brass and used with water pressure only; very powerful.

No.	A	B	C
Size	Small	Large	Extra Large
Each	1.75	2.70	8.00

13110 **Filter Pump—Richard's, Couplings for.** When ordering, state size of pump for which coupling is desired.

No. A.	For threaded faucet, small and large sizes	Each	.35
No. B.	For smooth faucet, small and large sizes	Each	.60
No. C.	For threaded faucet, extra large size	Each	.80



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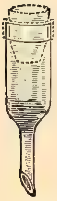

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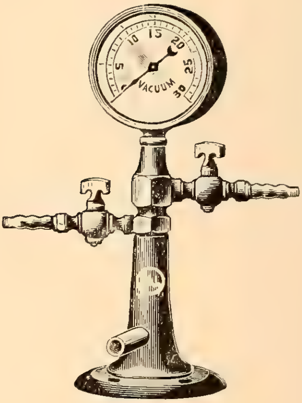

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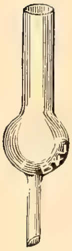

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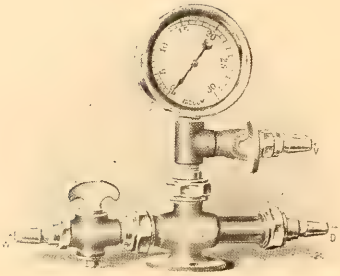

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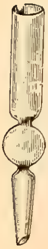
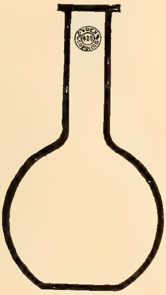


2725

13112	**Filter Pump.** This apparatus is capable of giving a vacuum up to 24 inches of mercury. Can be attached with permanent or portable pipe connections, and is an excellent apparatus for use in filtration, percolation, evaporation, or distillation work. Complete with two stopcocks and vacuum gauge, as illustrated____________________Each	25.00
13115	**Filter Pump.** Of brass; on base; with vacuum gauge_____________Each	12.50
13120	**Filter Pump.** Same as No. 13115 above, but without gauge______Each	6.00
13125	**Filter Pump.** Same as No. 13115 above, but with stopcocks at water and air connections ____Each	15.00
13130	**Filter Pump.** Same as No. 13125 above, but without gauge_______Each	8.50
2725	**Filter Tube—Fresenius'.** With conical outlet____________________Each	.20
2730	**Filter Tube—Fresenius'.** With straight outlet_________________Each	.20
2735	**Filter Tubes.** For use with Gooch crucibles, etc.; with stem ground to a point.	

No.	A	B	C	D	E	F
Diameter at top, mm	20	25	28	32	35	38
Each	.20	.25	.30	.40	.45	.50



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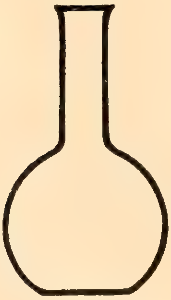

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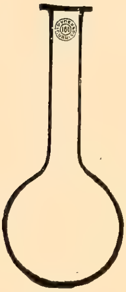


2770

2760 **Flasks—Pyrex.** Flat bottom; with vial mouth.

No.	A	B	C	D	E
Capacity, cc	50	100	150	200	300
For rubber stopper No.	0	1	1	3	4
No. in orig. case	192	168	108	144	96
Each	.17	.18	.20	.22	.25

In full case lots, less 10% discount.

No.	F	G	H	I	J
Capacity, cc	400	500	700	1000	1500
For rubber stopper No.	4	6	6	7	7
No. in orig. case	84	72	36	36	24
Each	.27	.30	.36	.43	.51

In full case lots, less 10% discount.

No.	K	L	M	N	O	P
Capacity, cc	2000	3000	6000	12000	12000	24000
For rubber stopper No.	8	9	10	10	13	13
No. in orig. case	18	12	12	6	6	4
Each	.60	.76	1.60	3.00	3.00	6.60

In full case lots, less 10% discount.

2765 **Flasks—Resistance Glass.** Flat bottom; pear shape, with vial mouth.

No.	A	B	C	D	E	F
Capacity, cc	30	60	90	120	180	250
For rubber stopper No.	0	2	2	3	3	4
No. in orig. case	192	192	168	108	144	96
Each	.12	.13	.14	.14	.16	.17

No.	G	H	I	J	K	L
Capacity, cc	350	500	700	1000	1400	2000
For rubber stopper No.	5	5	6	6	8	9
No. in orig. case	84	72	36	36	24	18
Each	.21	.24	.32	.38	.46	.55

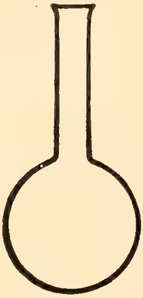
2770 **Flasks—Pyrex.** Round bottom; with vial mouth.

No.	A	B	C	D	E	F
Capacity, cc	100	150	200	300	400	500
For rubber stopper No.	2	3	3	4	4	4
No. in orig. case	84	180	144	84	72	48
Each	.18	.20	.22	.28	.32	.37

In full case lots, less 10% discount.

No.	G	H	I	J	K
Capacity, cc	700	1000	1500	2000	3000
For rubber stopper No.	6	6	7	9	10
No. in orig. case	42	30	24	18	12
Each	.45	.56	.71	.79	1.07

In full case lots, less 10% discount.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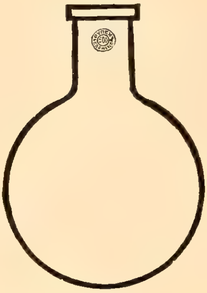
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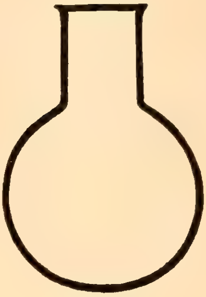

2785

2775 **Flasks—Resistance Glass.** Round bottom; long neck, with vial mouth.

No.	A	B	C	D	E	F
Capacity, cc	30	60	120	200	250	400
For rubber stopper, No.	0	1	2	3	3	4
No. in orig. case	192	192	108	144	96	84
Each	.12	.13	.14	.16	.17	.21

No.	G	H	I	J	K
Capacity, cc	500	700	1000	2000	3000
For rubber stopper, No.	5	6	7	9	10
No. in orig. case	72	36	36	18	12
Each	.24	.32	.38	.55	.82

2780 **Flasks—Pyrex.** Round bottom; with short, ring neck.

No.	A	B	C	D
Capacity, cc	200	500	1000	1500
For rubber stopper No.	3	6	8	9
No. in orig. case	144	72	36	24
Each	.28	.38	.55	.66

In full case lots, less 10% descount.

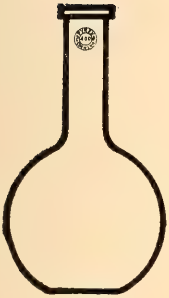
No.	E	F	G	H
Capacity, cc	2000	3000	5000	12000
For rubber stopper No.	10	10	11	11
No. in orig. case	18	12	6	6
Each	.78	.99	1.29	3.00

In full case lots, less 10% descount.

2785 **Flasks—Resistance Glass.** So-called "Balloon" flasks; round bottom; with vial mouth.

No.	A	B	C	D
Capacity, cc	90	120	250	500
For rubber stopper No.	4	5	6	7
No. in orig. case	108	108	96	72
Each	.14	.14	.17	.24

No.	E	F	G	H
Capacity, cc	1000	2000	3000	12000
For rubber stopper No.	8	9	9	11
No. in orig. case	36	18	12	6
Each	.38	.55	.82	3.30



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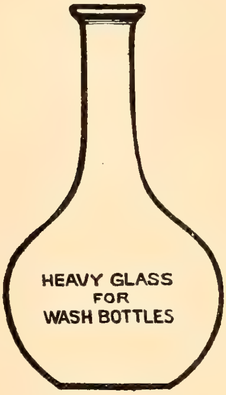

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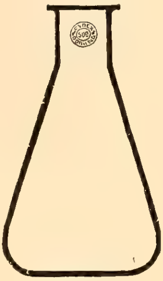

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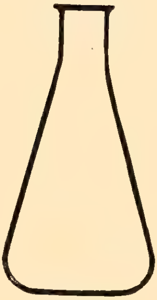


2810

2790 Flasks—Pyrex. Flat bottom; with ring neck.

No.	A	B	C	D	E
Capacity, cc	500	700	1000	1500	2000
For rubber stopper No.	5	6	7	7	8
No. in orig. case	72	36	36	24	18
Each	.38	.47	.55	.66	.78

In full case lots, less 10% discount.

No.	F	G	H	I
Capacity, cc	3000	6000	12000	12000
For rubber stopper No.	9	10	10	13
No. in orig. case	12	12	6	6
Each	.99	1.75	3.30	3.30

In full case lots, less 10% discount.

2800 Flasks—Wash Bottle. Of extra heavy glass, making them much more durable under mechanical stress than the ordinary boiling flask, and with stout, ring neck to withstand corking; flat bottom; with vial mouth.

No.	A	B	C	D	E
Capacity, cc	150	250	500	750	1000
For rubber stopper No.	2	2	5	6	6
Each	.20	.25	.30	.45	.50

2805 Flasks—Erlenmeyer, Pyrex.

No.	A	B	C	D	E	F	G	H
Capacity, cc	25	50	100	150	200	250	300	500
For rubber stopper No.	00	1	3	4	5	5	6	6
No. n orig. case	360	276	180	252	144	132	132	72
Each	.16	.16	.18	.18	.20	.22	.25	.29

In full case lots, less 10% discount.

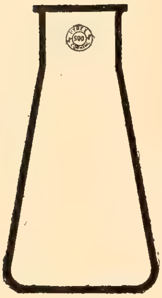
No.	I	J	K	L	M	N	O	P
Capacity, cc	600	750	1000	1500	2000	3000	4000	6000
For rubber stopper No.	6	7	8	9	10	10	10	10
No. in orig. case	60	48	36	24	24	15	12	6
Each	.31	.34	.42	.51	.60	.79	1.00	1.60

In full case lots, less 10% discount.

2810 Flasks—Erlenmeyer, Resistance Glass.

No.	A	B	C	D	E	F	G
Capacity, cc	30	60	90	120	150	180	250
For rubber stopper No.	2	2	3	3	4	4	5
No. in orig. case	360	276	180	180	252	144	132
Each	.12	.13	.14	.15	.16	.16	.17

No.	H	I	J	K	L	M	N
Capacity, cc	300	350	500	700	1000	1400	2000
For rubber stopper No.	5	5	6	7	7	9	9
No. in orig. case	132	132	72	48	36	24	24
Each	.19	.21	.24	.32	.38	.47	.55



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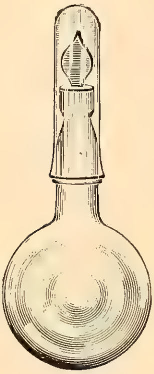


13135

2820

2815 **Flasks—Erlenmeyer, Pyrex.** With extra wide mouth.

No.	A	B	C	D	E
Capacity, cc	250	500	750	1000	2000
For rubber stopper No.	7	10	10	11	13
No. in orig. case	132	60	48	36	24
Each	.22	.29	.34	.42	.60

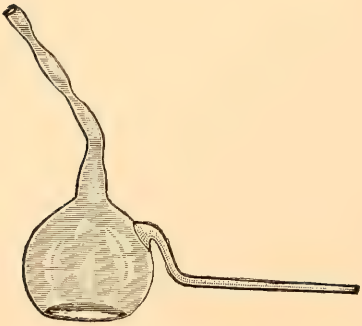
In full case lots, less 10% discount.

2820 **Flasks—Erlenmeyer, Resistance Glass.** With ground-in glass stopper.

No.	A	B	C	D
Capacity, cc	125	250	500	1000
Each	.60	.80	1.00	1.50

13135 **Flasks—Culture, Billings'.** Of clear, white glass; with stopper and cap; for gelatine and serum.

No.	A	B	C
Capacity, cc	100	250	500
Each	1.20	1.50	1.80



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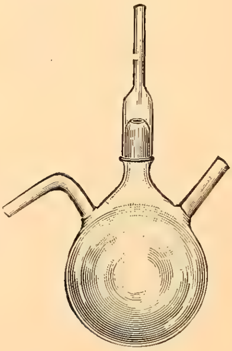


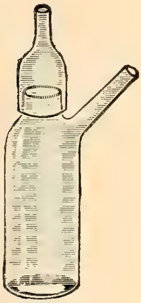
13140

13140 **Flasks—Culture, Chamberlain's** (or Pasteur's). With two side necks.

No.	A	B	C
Capacity, cc	50	100	200
Each	.75	1.00	1.50

13145 **Flasks—Culture, Chamberlain's.** Pasteur's pipette.

No.	A	B	C	D
Capacity, cc	125	250	500	1000
Each	.60	.75	.90	1.20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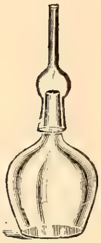
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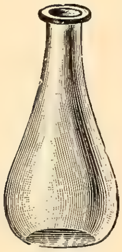
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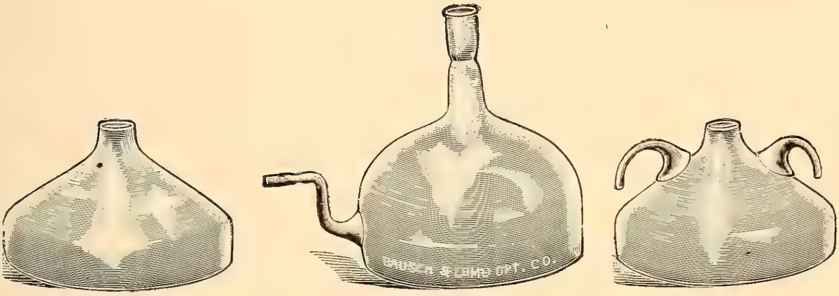

A B C

13160

13150 **Flasks—Culture, Chamberlain's** (or Pasteur's). For fluids; with cap ground on.

No.	A	B	C
Capacity, cc	50	100	200
Each	.50	.70	1.00

13155 **Flasks—Culture, Erlenmeyer's** (or Koch's). For bread and gelatine.

No.	A	B
Capacity, cc	75	100
Each	.15	.20

13160 **Flasks—Culture, Fernbach's Antitoxin.** For diphtheria cultures; of best clean white glass; capacity, 2 liters.

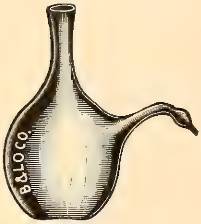
Form	A	B	C
Each	1.50	2.50	2.25

13165 **Flasks—Culture, Freudenreich's.** With cap ground on, with side neck.

No.	A	B	C	D
Capacity, cc	25	50	100	200
Each	.50	.60	.75	1.00

13170 **Flasks—Culture, Freudenreich's.** With cap ground on, without side neck.

No.	A	B	C	D
Capacity, cc	25	50	100	200
Each	.40	.45	.60	.80



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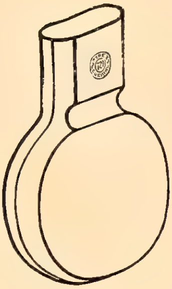

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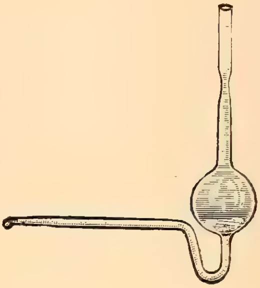

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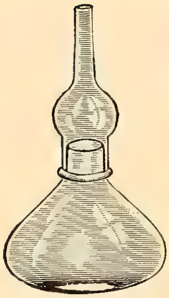

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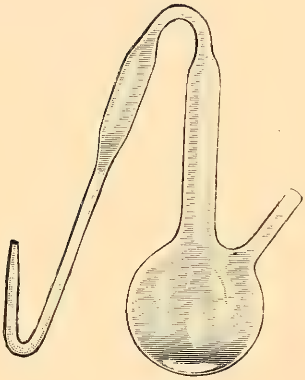

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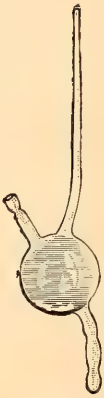


13185

13175 **Flask—Culture, Kolle's.** Of Pyrex glass; with neck indentation; capacity, 320 cc; number in original case, 84..................Each .75

13180 **Flasks—Culture, Lister's.** For serum.

No.	A	B	C
Capacity, cc	500	750	1000
Each	.60	.75	.80

13185 **Flasks—Culture, Martin's.** For toxins.

No.	A	B	C	D
Capacity, cc	125	250	500	1000
Each	.52	.76	1.10	1.50

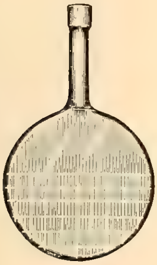
13190 **Flasks—Culture, Miquel's.** With flat bottom and ground-on cap; for use with bacterial counting apparatus.

No.	A	B	C	D
Capacity, cc	50	75	100	150
Each	.52	.60	.72	.90

13195 **Flask—Culture, Miquel's.** Pipette form......................Each .45

13200 **Flasks—Culture, Pasteur's.** With side tubulations and constricted neck.

No.	A	B	C	D
Capacity, cc	100	250	500	1000
Each	.60	.75	.90	1.20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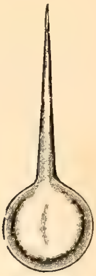
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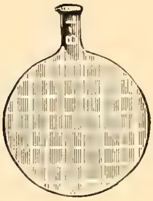
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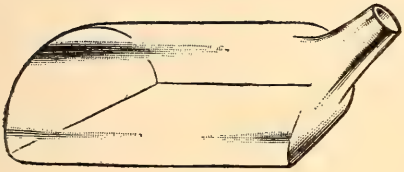
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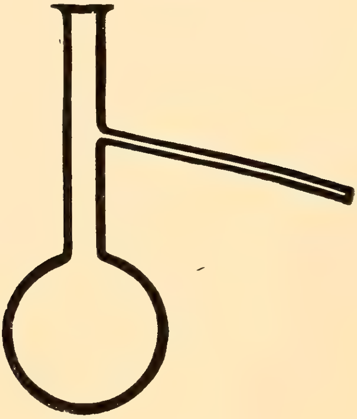
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13205	**Flask—Culture, Piorkowski's.** Height, 50 mm; length, 140 mm; width, 140 mm	Each	1.00
13210	**Flask—Culture, Roszahegzi's.** Plain; with thin, parallel walls	Each	.35
13215	**Flask—Culture, Roszahegzi's.** Graduated in square centimeters over one-half of the surface	Each	.80
13218	**Flask—Culture, Roszahegzi's.** Graduated in square centimeters over entire surface	Each	.80
13221	**Flask—Culture, Sternberg's.** For serum; thin flask of clearest white glass, with neck drawn to a point; capacity, 25 cc	Each	.15

2845 **Flasks—Distilling, Pyrex.** With side tube at center of neck.

No.	A	B	C	D	E	F
Capacity, cc	25	50	100	125	200	250
For rubber stopper No.	1	1	2	3	3	3
Each	.36	.40	.45	.50	.55	.60

No.	G	H	I	J	K	L
Capacity, cc	300	500	1000	1500	2000	3000
For rubber stopper No.	4	4	6	7	9	10
Each	.65	.70	1.18	1.45	1.60	2.15

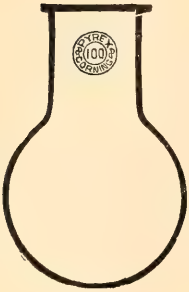
Note.—Flasks can be furnished also with side tube placed high or low on neck. Prices remain the same.

2860 **Flasks—Distilling.** Of resistance glass; with side tube at cented of neck.

No.	A	B	C	D	E	F
Capacity, cc	30	60	90	150	180	250
For rubber stopper No.	00	0	2	3	4	5
Each	.52	.52	.63	.68	.74	.76

No.	G	H	I	J	K
Capacity, cc	350	500	700	1000	2000
For rubber stopper No.	5	5	6	7	9
Each	.80	.90	1.06	1.22	1.87

Note.—Flasks can be furnished also with side tube placed high or low on neck. Prices remain the same.



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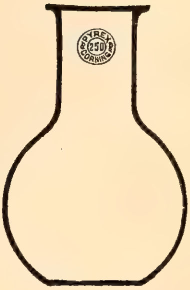

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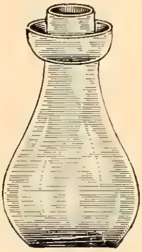

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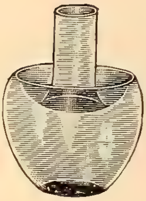


2935

2920 Flasks—Extraction, Pyrex. Round bottom; with wide neck and vial mouth.

No.	A	B
Capacity, cc	100	2000
For rubber stopper No.	6	13
No. in orig. case	120	18
Each	.18	.69

In full case lots, less 10% discount.

2925 Flasks—Extraction, Pyrex. Flat bottom; with wide neck and vial mouth.

No.	A	B	C	D	E	F	G	H	I
Capacity, cc	50	100	150	250	500	750	1000	2000	3000
For rubber stopper No.	6	6	7	8	10	10	11	13	
No. in orig. case	168	120	108	120	60	48	36	18	12
Each	.16	.18	.19	.20	.29	.36	.54	.98	1.40

In full case lots, less 10% discount.

2930 Flasks—Extraction. Of resistance glass; flat bottom; with short, wide neck.

No.	A	B	C	D
Capacity, cc	60	125	175	250
For rubber stopper No.	7	7	8	9
No. in orig. case	192	120	144	96
Each	.12	.14	.19	.23

2935 Flasks—Extraction, Knorr's. With indentation for mercury seal.

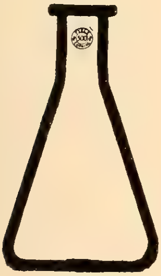
No.	A	B	C	D
Capacity, cc	100	150	200	250
Each	.60	.80	.90	1.00

2940 Flasks—Extraction, Sy's. With trough for mercury seal; with large neck to facilitate cleaning.

No.	A	B	C	D
Capacity, cc	100	150	200	250
Each	.75	1.00	1.10	1.25

GLASSWARE CATALOGUE

For a more complete assortment of Glassware, please refer to our Glassware Catalogue, which we will be glad to forward to you.



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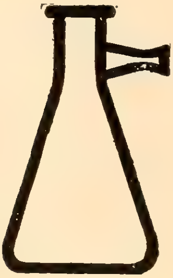

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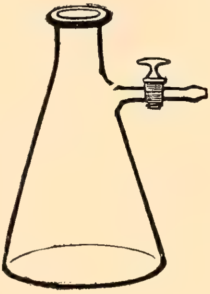

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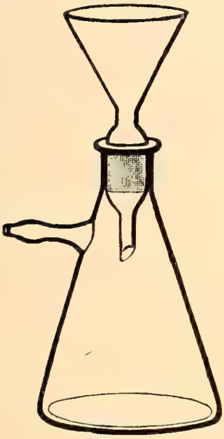

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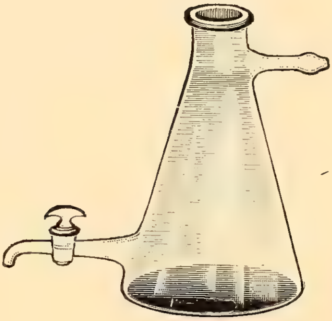


2980

2950 **Flasks—Filtering, Pyrex.** Erlenmeyer form; of heavy glass to withstand pressure.

No.	A	B	C	D	E
Capacity	250	500	1000	2000	4000
Each	.40	.54	.84	1.20	2.00

In full case lots, less 10%.

2955 **Flasks—Filtering.** Same as No. 2950 above, but of ordinary glass.

No.	A	B	C	D	E
Capacity, cc	250	500	750	1000	2000
Each	.23	.32	.40	.45	.75

2960 **Flasks—Filtering, Pyrex.** Of heavy glass to withstand pressure; with side neck.

No.	A	B	C	D	E
Capacity	250	500	1000	2000	4000
Each	.70	.95	1.45	2.40	4.00

In full case lots, less 10%.

2965 **Flasks—Filtering.** Same as No. 2960 above, but of ordinary glass.

Capacity, cc	250	500	750	1000	2000
For rubber stopper No.	5	7	7	7	9
Each	.70	.67	.84	1.00	1.95

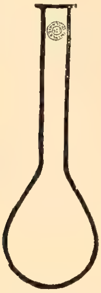
2970 **Flasks—Filtering.** Same as No. 2965 above, but with side neck fitted with glass stopcock.

No.	A	B	C	D
Capacity, cc	250	500	1000	2000
Each	1.90	2.25	3.75	5.25

2975 **Flasks—Filtering.** Same as No. 2965 above, but with funnel ground into neck.

No.	A	B
Capacity, cc	200	1000
Each	2.70	4.10

2980 **Flask—Filtering.** Erlenmeyer form; of heavy glass; with side tube in neck and with tubulation, having stopcock on opposite side near bottom; capacity, 1000 cc ------------------------------------Each **3.00**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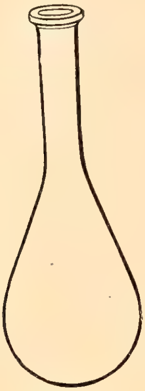
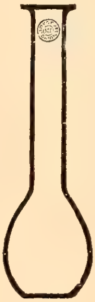

3000


2995

2990 **Flasks—Kjeldahl's, Pyrex.** Round bottom; with long neck.

No.	A	B	C	D
Capacity, cc	300	500	650	800
Length over all, mm	290	320	320	380
For rubber stopper No.	5	6	6	6
No. in orig. case	60	36	36	36
Each	.28	.37	.42	.45

In full case lots, less 10% discount.

2995 **Flasks—Kjeldahl's, Pyrex.** Flat bottom; with long neck.

No.	A	B
Capacity, cc	300	500
Length over all, mm	260	300
For rubber stopper No.	5	6
No. in orig. case	60	36
Each	.28	.37

In full case lots, less 10% discount.

3000 **Flasks—Kjeldahl's, Pyrex.** Round bottom; with short neck.

No	A	B	C
Capacity, cc	300	500	800
Length over all, mm	230	240	275
For rubber stopper No.	5	6	6
No. in orig. case	60	36	36
Each	.28	.37	.45

In full case lots, less 10% discount.

Kjeldahl digestion and distillation apparatus of various kinds, as well as safety tubes, etc., are listed under Nitgrogen Determination Apparatus.

3045

3038 **Flasks—Volumetric, Pyrex.** With single mark on neck for graduation, without stopper.

No.	A	B	C	D	E
Capacity, cc	100	250	500	1000	2000
No. in orig. case	84	72	48	30	24
Each	.34	.48	.64	.88	1.14

In full case lots less 10% discount.

3040 **Flasks—Volumetric.** Accurately graduated, with one mark on neck.

No.	A	B	C	D	E	F	G
Capacity, cc	5	10	25	50	100	200	250
Each	.25	.25	.35	.42	.55	.58	.65

No.	H	I	J	K	L	M
Capacity, cc	300	500	1000	2000	3000	6000
Each	.70	.92	1.20	2.00	3.00	5.00

3045 **Flasks—Volumetric.** Graduated to meet the requirements of the U. S. Bureau of Standards; adjusted for containing.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	1.20	1.50	2.00	2.50	3.20	4.00

3050 **Flasks—Volumetric.** Same as No. 3045 above, but adjusted for delivering.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	1.20	1.50	2.00	2.50	3.20	4.00

3052 **Flasks—Volumetric, Pyrex.** Graduated to specifications of the U. S. Bureau of Standards; each flask numbered and initialed "App. Div."

No.	A	B	C	D	E
Capacity, cc	100	250	500	1000	2000
No. in orig. case	84	72	48	30	24
Each	1.00	1.25	1.50	2.00	2.50

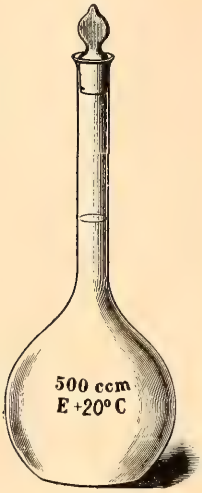
In full case lots less 10% discount.

3055 **Flasks—Volumetric.** Graduated to meet the requirements of the U. S. Bureau of Standards, with government control stamp and official certificate of correction; adjusted for containing.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	2.10	2.50	3.30	4.20	5.75	6.70

3060 **Flasks—Volumetric.** Same as No. 3055 above, but adjusted for delivering.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	2.10	2.50	3.30	4.20	5.75	6.70



3070

3065 **Flasks—Volumetric.** Accurately graduated with one mark on neck and with ground-glass stopper.

No.	A	B	C	D	E	F	G
Capacity, cc	5	10	25	50	100	200	250
Each	.40	.40	.55	.65	.95	1.00	1.05

No.	H	I	J	K	L	M
Capacity, cc	300	500	1000	2000	3000	6000
Each	1.15	1.25	1.45	2.35	3.75	6.00

3070 **Flasks—Volumetric.** With ground-glass stopper; graduated to meet the requirements of the U. S. Bureau of Standards; adjusted for containing.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	1.75	2.00	2.50	3.00	4.00	4.70

3075 **Flasks—Volumetric.** Same as No. 3070 above, but adjusted for delivering.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	1.75	2.00	2.50	3.00	4.00	4.70

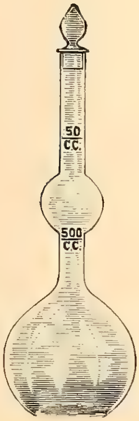
3080 **Flasks—Volumetric.** With ground-glass stopper; graduated to meet the requirements of the U. S. Bureau of Standards, with government control stamp and official certificate of correction; adjusted for containing.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	2.80	3.00	4.20	5.00	6.70	7.50

3085 **Flasks—Volumetric.** Same as No. 3080 above, but adjusted for delivering.

No.	A	B	C	D	E	F
Capacity, cc	50	100	250	500	1000	2000
Each	2.80	3.00	4.20	5.00	6.70	7.50

3095



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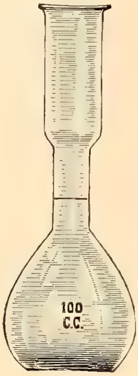
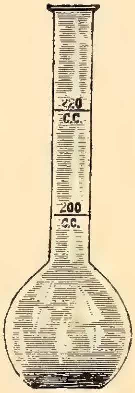


3115

3130



220 C.C.
200 C.C.

3135

3090 **Flasks—Volumetric.** With two marks on neck; graduated for containing and delivering exact quantities.

No.	A	B	C	D	E	F	G	H
Capacity, cc	25	50	100	200	250	500	1000	2000
Each	1.00	1.15	1.20	1.25	1.25	1.65	2.00	2.70

3095 **Flasks—Volumetric.** With two marks on neck; graduated for containing and delivering exact quantities; with ground-glass stopper.

No.	A	B	C	D	E	F	G	H
Capacity, cc	25	50	100	200	250	500	1000	2000
Each	1.20	1.35	1.45	1.50	1.50	2.00	2.25	3.00

3110 **Flasks—Volumetric, Giles'.** With two graduation marks and ground-glass stopper; when used for making normal solutions the 10% extra volume in the neck of the flask is used for ascertaining exact titration, leaving a volume equivalent to the exact capacity of flask, for correction.

No.	A	B	C	D	E	F
Capacity, cc	50/5	100/10	250/25	500/50	1000/100	2000/200
Each	1.40	1.50	2.00	2.60	3.60	5.25

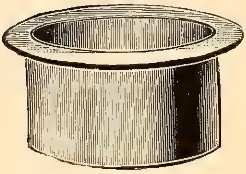
3115 **Flasks—Volumetric, Kohlrausch's.** For saccharometric polarization; graduated.

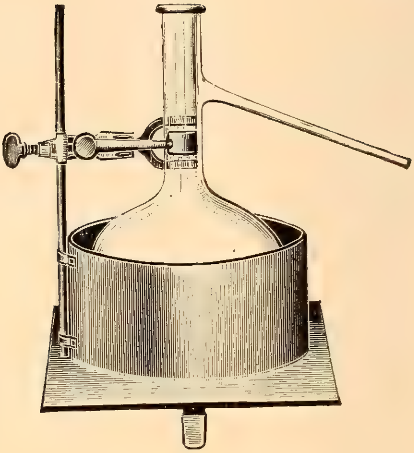
No.	A	B	C	D	E	F	G	H	I
Capacity, cc	50	100	150	200	200.6	201.2	201.4	400	500
Each	.55	.60	.80	1.00	1.00	1.00	1.00	1.50	1.75

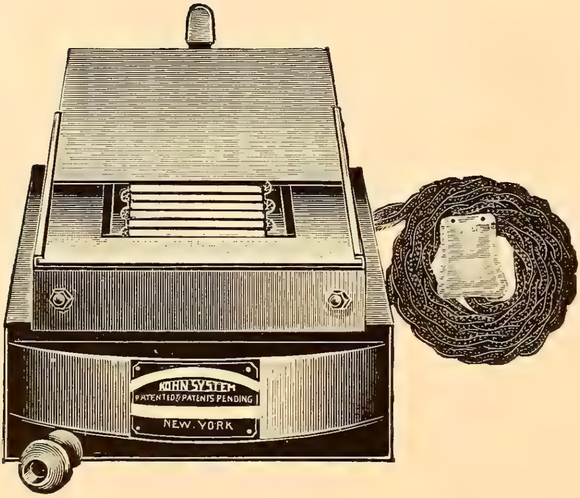
3130 **Flasks—Sugar, Bates'.** Pear-shape, with flaring top; capacity, 100 cc --Each .90

3135 **Flasks—Sugar.** With two graduations; without glass stopper.

No.	A	B	C
Capacity, cc	50 and 55	100 and 110	200 and 220
Each	.42	.52	.76





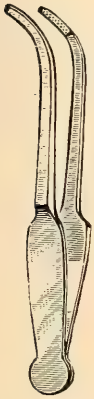


13225 **Flask Heater Combination.** Offers combination of flask heater, small hot plate and sand bath; base or housing consists of heavy sheet-steel casing; maximum temperature, 540° C., which may be reduced to low enough temperature for ether and alcohol extractions; rheostat in the casing controls various temperatures desired; upper part of casing is flanged inward on each side, forming grooves to receive several attachments; for flask heating, distilling, etc., hot plate attachment is removed and flask heater attachment substituted; when sand, oil or water bath is required, sand bath attachment, either size, is inserted into base of flask heater attachment; unit is replaceable and may be rewound by operator, using "coiled wire"; one unit is required for each apparatus ---------------------------------------Each 45.00

Extra Units (one per heater) ---------------------------------Each 4.00

Extra coiled wire for rewinding units -----------------------Per unit 2.00

(Please specify voltage when ordering.)



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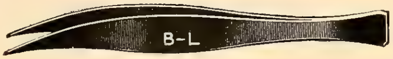

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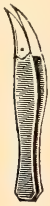

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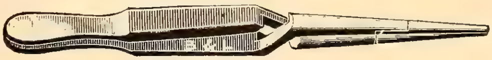

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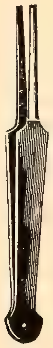

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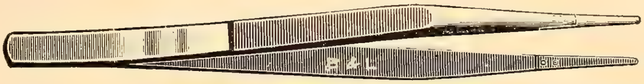

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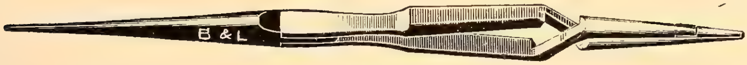


13269

13230	**Forceps.** Of brass; straight	Each	.30
13232	**Forceps.** Same as No. 13230, but nickel-plated	Each	.30
13238	**Forceps.** Of brass; bent	Each	.30
13240	**Forceps.** Same as No. 13238, but nickel-plated	Each	.30
13245	**Forceps.** Of brass; with ivory tips	Each	1.50
13250	**Forceps** (Goosenecks). Of brass, nickel-plated; will not corrode; length, 150 mm	Each	.70

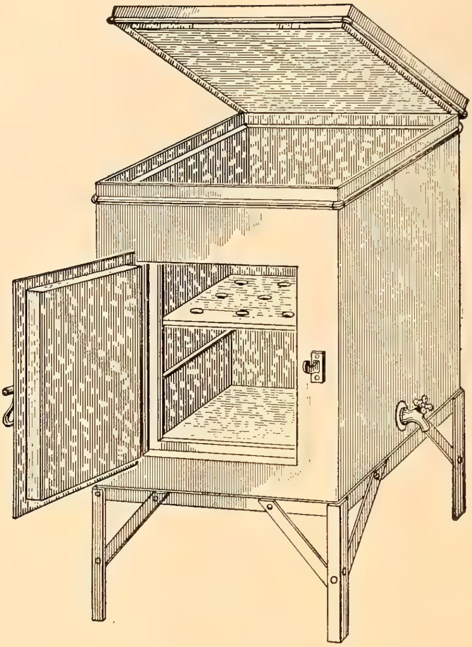
13255 **Forceps.** Of steel; plain.

No.	A	B	C	D
Length, mm	75	100	125	150
Each	.12	.15	.18	.20

13260	**Forceps—Platinum-Tipped.** Nickel-plated, with heavy platinum shoes; length, 170 mm	Price on application.
13263	**Forceps—Platinum-Tipped.** Nickel-Plated, with heavy platinum shoes; length, 125 mm	Prices on application.
13266	**Forceps—Platinum-Tipped.** With heavy, solid platinum tips	Prices on application.
13269	**Forceps Platinum-Tipped.** Nickel-plated, with solid platinum tips; length, 135 mm	Price on application.
13272	**Forceps—Platinum-Tipped.** Nickel-plated; with solid platinum tips; length, 90 mm	Price on application.

For Forceps see also "Dissecting Instruments" on pages 154-157

13285



13280

13290

13280 **Freezing Apparatus.** For pathological specimens; outer case made of heavy heavy galvanized American ingot iron, handsomely enamelled white, with hinges and door fastening of heavy, polished brass; draw-off spigot of heavy brass and special design, so that it may be easily cleaned out, if ice or salt chokes it; inside case is layer of Nonpareil cork board, ¾ in. thick; inner lining of copper and cabinet part also of copper, extra heavy and double braced to withstand pressure from ice; provided with 6 in. space on top and 2 in. space all around, including bottom of salt and ice; temperature may be regulated by amount of salt used, and temperatures as low as —20° C may be maintained, at which temperature specimens may be kept indefinitely.

No.	A	B	C
Height, cm	25	30	35
Length, cm	25	25	30
Width, cm	25	25	30
No. of shelves	1	2	3
Each	**72.00**	**78.00**	**90.00**

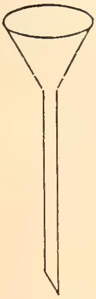
13285 **Funnels—Agate, Nickel Steel.**

No.	A	B	C	D	E
Capacity (approx.) cc	250	500	1000	2000	4000
Each	**.45**	**.50**	**.60**	**.75**	**1.00**

13290 **Funnels—Copper.**

No.	A	B	C	D	E
Capacity, cc	125	250	500	1000	2000
Each	**1.00**	**1.20**	**1.40**	**1.60**	**1.80**

3140



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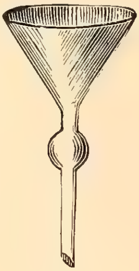

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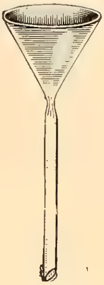


3150

3155

3140 **Funnels.** Of clear, white glass; with stem ground to point; angle, 60°.

No.	A	B	C	D	E	F	G	H
Diameter, mm	25	30	40	50	65	75	90	100
Each	.24	.24	.24	.28	.30	.34	.36	.40

No.	1	J	K	L	M	N	O	P
Diameter, mm	110	120	150	170	200	225	250	300
Each	.48	.54	.68	.94	1.04	1.42	1.80	2.50

3145 **Funnels—Bunsen's.** Of clear, white glass; with exact angle of 60°; with long, thin stems ground to point, for use with rubber stopper in filtering flask, and with ground rim; an especially accurate funnel.

No.	A	B	C	D	E
Diameter, mm	25	40	50	65	75
Each	.24	.24	.28	.30	.34

No.	G	G	H	I	J
Diameter, mm	90	100	110	120	150
Each	.36	.40	.48	.54	.68

3150 **Funnels—Bunsen's.** Of clear, white glass; with constriction in top of stem, facilitating rapid filtration; with stem ground to point; angle, 60°.

No.	A	B	C	D
Diameter, mm	50	65	75	100
Each	.28	.30	.34	.40

3155 **Funnels.** Of clear, white glass, ribbed; designed for rapid filtration; with stem ground to point; angle, 60°.

No.	A	B	C	D	E
Diameter, mm	65	70	90	120	150
Capacity, cc	25	50	125	250	500
Each	.14	.15	.16	.23	.34

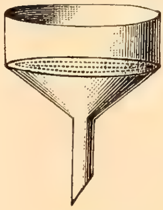
No.	F	G	H	I
Diameter, mm	180	220	255	325
Capacity, cc	1000	2000	4000	8000
Each	.48	.75	1.20	2.60

3160 **Funnels.** Of clear, white glass; with bulb, for filtering through glass wool.

No.	A	B	C
Diameter, mm	100	150	200
Each	.45	.65	1.00

5785

5790


5795-00

5805

5785 **Funnels.** Of porcelain, glazed; straight opening, with handle.

Size No.	1	2	3
Diameter, mm	86	120	175
Each	.30	.60	1.70

5790 **Funnels.** Of porcelain, glazed; with handle; perforated sides.

Size No.	1	2	3	4	5
Diameter, mm	110	130	160	201	260
Each	.70	.90	1.50	1.80	3.25

5795 **Funnels—Bűchner.** Of Coors porcelain; with fixed, perforated plate.

Size No.	0	1	2	2a
Diameter, mm	48	59	85	108
Height, mm	81	85	135	140
Distance plate from rim, mm	20	25	38	43
Each	.90	1.08	1.80	2.34

Size No.	3	4	4a	5
Diameter, mm	112	150	160	200
Height, mm	167	215	200	255
Distance plate from rim, mm	33	40	56	49
Each	2.52	4.32	5.04	6.48

5800 **Funnels—Bűchner.** Of Ohio porcelain; with stationary, perforated, plate and straight walls.

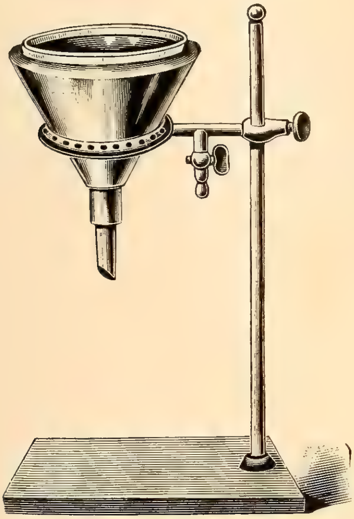
Size No.	1	2	3	4
Diameter, mm	50	60	80	100
Height of walls, mm	20	25	30	40
Each	.75	1.00	1.25	1.75

Size No.	5	6	7	8
Diameter, mm	150	200	250	300
Height of walls, mm	60	90	100	120
Each	2.70	5.50	8.50	14.00

5805 **Funnels—Hirsch.** Of Coors porcelain; with fixed, perforated plate.

Size No.	000	00	0	1
Diameter, mm	50	75	92	103
Height, mm	64	82	105	122
Diameter perforated plate, mm	36	44	57	59
Distance plate from rim, mm	10	20	26	34
Each	.72	.90	1.08	1.44

Size No.	2	3	4
Diameter, mm	120	140	163
Height, mm	140	165	190
Diameter perforated plate, mm	59	59	112
Distance plate from rim, mm	50	65	38
Each	1.80	2.52	3.24



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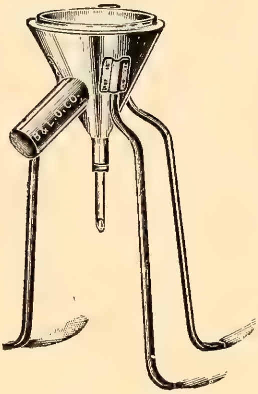

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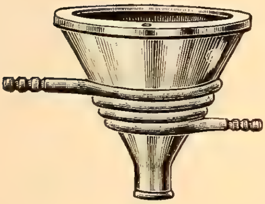

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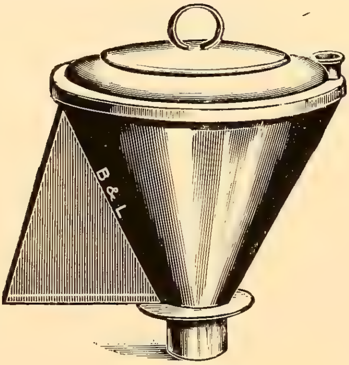
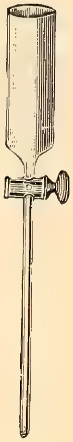


13303-07

Funnels—Hot Water. Designed for use in filtering inflammable liquids, agar agar and other substances which must be kept at a high temperature in order to filter them.

13295	**Funnel—Hot Water.** Consists of circular copper water bath held in a Bunsen ring burner attached to a support upon which it is adjustable for height; suitable glass funnel is included ....Each	9.00
13299	**Funnel—Hot Water or Steam.** Of heavy copper, single wall; surrounded by a coil through which hot water or steam is passed..........Each	5.75
13303	**Funnel—Hot Water.** According to Plantamour; double-walled; of copper ....Each	6.75
13307	**Funnel—Hot Water.** According to Plantamour; double-walled; of tin ....Each	4.50
13311	**Funnel—Hot Water.** Of heavy, polished copper; double-walled; mounted on three iron legs ....Each	7.20

3175.



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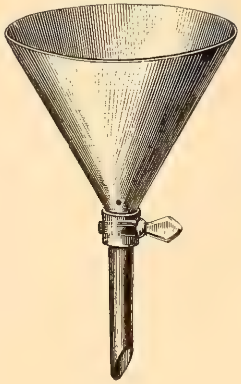

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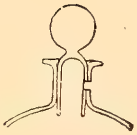

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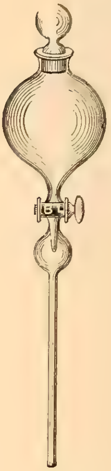


3195

3170 Funnels—Separatory. Of clear, white glass, heavy; with stem ground to point; angle, 60°.

No.	A	B	C
Diameter, mm	100	150	200
Each	2.25	3.00	4.00

3175 Funnels—Separatory. Open top; bell shape.

No.	A	B	C	D
Capacity, cc	25	50	75	100
Each	1.10	1.40	1.55	1.80

3180 Funnels—Separatory. Open top; cylindrical.

No.	A	B	C	D	E	F	G
Capacity, cc	30	60	100	125	150	200	250
Each	1.15	1.25	1.65	1.70	1.85	1.95	2.05

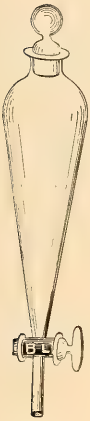
3185 Funnels—Separatory. With ground-glass stopper; pear shape.

No.	A	B	C	D	E	F	G	H	I	J
Capacity, cc	30	60	125	175	250	350	500	750	1000	2000
Each	1.25	1.45	1.95	2.10	2.20	2.50	2.65	3.00	3.70	6.00

3190 Funnels—Separatory. Same as No. 3185 above, but with air-vent in stopper.

No.	A	B	C	D	E
Capacity, cc	125	250	500	1000	2000
Each	2.30	2.80	3.35	4.60	7.20

3195 Funnel—Dropping, Walter's. For examining single drops; capacity, 60 cc --Each 2.10



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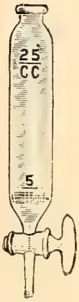

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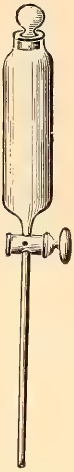

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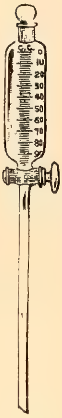

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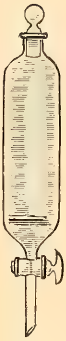

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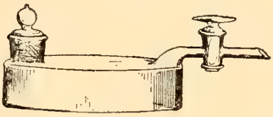


3237

3205 **Funnels—Separatory, Squibb's.** With ground-glass stopper.

No.	A	B	C	D	E
Capacity, cc	125	250	500	1000	2000
Each	**2.20**	**3.20**	**4.00**	**6.00**	**9.70**

3220 **Funnel—Separatory, Strauss'.** For estimating lactic acid in gastric juice; with glass stopcock. ---------------------------------Each **1.80**

3225 **Funnels—Separatory.** With ground-glass stopper; cylindrical.

No.	A	B	C	D	E	F	G	H
Capacity, cc	30	60	125	250	300	500	1000	1250
Each	**1.30**	**1.45**	**1.95**	**2.30**	**2.60**	**2.80**	**3.70**	**4.40**

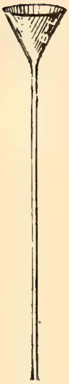
3230 **Funnels—Separatory.** With ground-glass stopper and air-vent; cylindrical; graduated.

No.	A	B	C	D
Capacity, cc	125	250	500	1000
Each	**2.90**	**4.40**	**5.40**	**7.20**

3235 **Funnels—Separatory.** Of stout glass; with ground-glass stopper and short stem; cylindrical.

No.	A	B
Capacity, cc	500	1000
Each	**.350**	**4.55**

3237 **Funnel—Separatory, Terrapin.** For immiscible fluids, as used by the Bureau of Chemistry, U. S. Department of Agriculture; with ground-glass stopper and glass stopcock; capacity, 200 cc --------------Each **3.0**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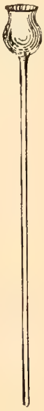
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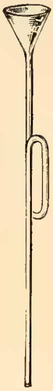
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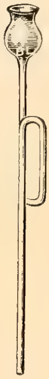
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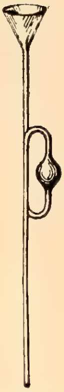
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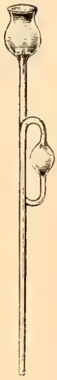
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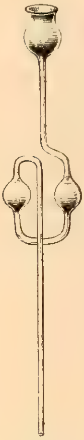
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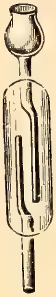
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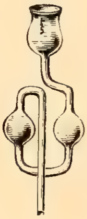
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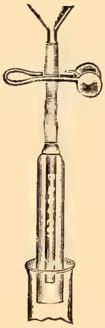

3305

3240 **Funnel Tubes.** Straight; with conical tip.

No.	A	B	C	D
Length, mm	200	250	300	400
Each	.11	.12	.12	.14

3245 **Funnel Tubes.** Straight; thistle top.

No.	A	B	C	D
Length, mm	200	250	300	400
Each	.10	.11	.11	.12

3250 **Funnel Tubes.** With loop; conical top.

No.	A	B	C
Length, mm	200	300	400
Each	.27	.28	.30

3255 **Funnel Tubes.** With loop; thistle top.

No.	A	B	C
Length, mm	200	300	400
Each	.24	.25	.27

3260 **Funnel Tube.** With loop and one bulb; conical top; length, 300 mm ---------- Each .35

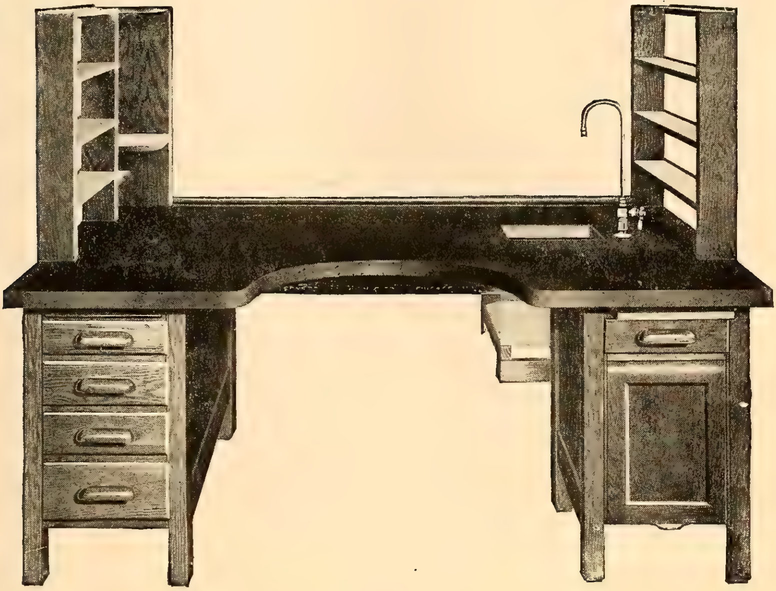
3265 **Funnel Tube.** With loop and one bulb; thistle top; length, 300 mm ---------- Each .32

3270 **Funnel Tube.** With double loop and two bulbs; thistle top; length, 300 mm ---------- Each .38

3275 **Funnel Tube.** With double loop and two bulbs near top; thistle top; with short stem; length 300 mm ---------- Each .42

3285 **Funnel Tube—Babo's.** With thistle top ---------- Each 1.25

3305 **Funnel Attachment.** For use in filling test tubes, flasks, etc.; prevents contact of fluid with surface of vessel being filled, so that latter remains clean for insertion of cotton plug; with rubber tubing and pinchcock ---------- Each .50



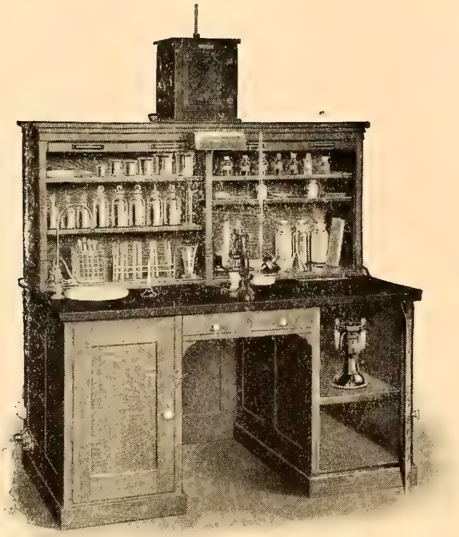
13320

Laboratory Furniture

The designing of Laboratory Equipment and the installation of furniture suited for any particular need receive a large part of our attention and effort. We are able to give practical advice in the selection of these materials and we are pleased to respond at all times to any request of our friends for such advice.

In this catalog are shown special furniture, but these by no means are representative of the materials which are available.

1320 **Pathological Laboratory Table.** Especially adapted for pathological laboratories, doctors' offices and private laboratories; size, 6 ft. long x 3 ft. wide x 32 in. hight; top of birch, 1¾ in. thick, treated acid-proof; exposed parts below top of oak, finished antique (or any other shade, when so ordered), with one coat of filler and three coats of varnish, rubbed; bottle shelves of hardwood, treated acid-proof; provided with five drawers, one cupboard and two pull shelves; plumbing consists of one soapstone sink, 9 x 11 x 8 in., supplied with overflow, waste trap and one water cock with plumbing to floor; weight, crated, 175 lbs. --Each 175.00



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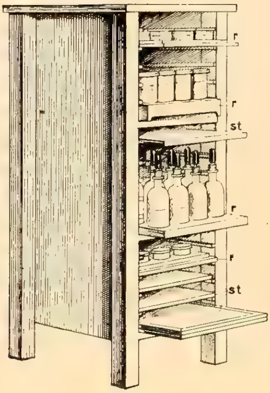
13330 **Laboratory Table.** Cabinet made of oak; table top of maple, 1⅛ in. thick, finished in stainless, acid-proof black; upper part of cabinet divided into two equal compartments, each having two adjustable shelves; oak roller curtains provided for both compartments; lower part of cabinet has two large compartments, provided with doors; right-hand compartment provided with exceptionally solid stationary shelf, on which centrifuge is mounted, with storage compartment below; left hand compartment provided with shelf, affording storage space for microscope, glassware, etc.; two long drawers in center of table have compartments for microscope slides, cover glasses and other accessories; all drawers and compartments are provided with locks; dimensions: working space—length, 55¾ in.; width, 18 in.; upper compartments—height, 20¼ in.; width, 25½ in.; depth, 11¼ in.; lower compartments—height, 25½ in.; width, 15 in.; depth, 30 in.; height from floor to table top, 30 in.; over all—height, 56 in.; width, 56 in.; depth, 33 in.; connections for running water and drain are provided and a porcelain sink, 7 in. in diameter x 6½ in. deep, together with a goose-neck faucet; gas connection for Bunsen burner is brought up to left hand side of table; burette furnished, attached to side of dividing partition in upper part of cabinet, table is wired for electricity and has a push switch, which cuts off electric current for entire table; five Edison base sockets provide connections for incubator and centrifuge, leaving three extra sockets for other connections; adjustable desk light with shade is installed directly over the dividing partition; electric microscope illuminator, covered with daylight glass and provided with convenient push switch, is embedded in center of table; complete as described, but without incubator, centrifuge, microscope, glassware, reagents or other apparatus -- Each **500.00**

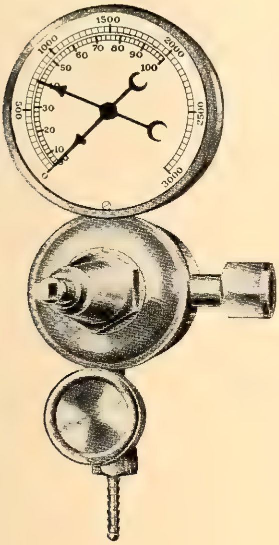


13330

13320 **Cabinet for Slide Trays and Reagents—Kingsbury's.** This cabinet is indispensable for storing of microscopic slides on trays and for reagents on sliding boards; provided with three reagent boards for bottles and jars and two slide trays; stand has furniture slides on the legs and is easily moved on the floor ....Each 38.00

YOUR LABORATORY NEEDS of every description can be met by us to your full satisfaction. This catalog is but an indication of the completeness with which we can supply your wants in **Chemicals, Chemical** and **Bacteriological Apparatus, Reagents** and any other **Laboratory Supplies.** If you want any special apparatus, we will make it or get it for you. Remember that when sending out your next list for estimates.

13335	**Gas—Ammonia, anhydrous.** Liquified; in cylinders of about 10 lbs.	Per pound	.95
13336	**Cylinder** only extra, sold outright	Each	10.00
13340	**Gas—Ammonia, anhydrous.** Liquified; in cylinders of about 25 lbs.	Per pound	.85
13341	**Cylinder** only extra, sold outright	Each	15.00
13345	**Gas—Carbonic Acid.** Liquified; in 20-lb. cylinders, from which any amount can be drawn	Per pound	.40
13346	**Cylinder** only extra, returnable for credit	Each	25.50
13350	**Gas—Chlorine.** Liquified; in cylinders of 100 pounds	Per pound	1.50
13351	**Cylinder** only, returnable for credit	Each	15.00
13355	**Gas—Hydrogen.** In 200 cu. ft. cylinders; compressed to 1800 lbs.	Per cu. ft.	.10
13356	**Cylinders** only, returnable for credit (Rental of 75c monthly charged after one month.)	Each	40.00
13360	**Gas—Nitrous Oxide.** Liquified; cylinder contains 100 gal. of gas	Each	15.00
13361	**Cylinder** only, sold outright	Each	6.00
	Cylinder refilled for		9.00
13365	**Gas—Oxygen, Atmospheric, High Pressure.** In tested cylinders compressed to 120 atmospheres	Per cu. ft.	.10
13366	**Cylinder** only, of 100 cu. ft. capacity, returnable for credit	Extra	30.00
13367	**Cylinder** only, of 150 cu. ft. capacity, returnable for credit	Extra	33.00
13368	**Cylinder** only, of 200 cu. ft. capacity, returnable for credit	Extra	40.00
13375	**Gas—Oxygen.** Compressed under low pressure; in steel cylinders of 100-gallon capacity	Per cylinder, filled	30.00
13376	**Cylinder** only (sold outright), refilled	at	20.00
13380	**Gas—Oxygen.** Compressed in steel cylinders containing 40 gal. of oxygen (size 16 in. long by 3½ in. diameter). Gas only		3.00
13381	**Cylinder** for same	Each	5.00
13382	**Yoke** for rubber tubing	Each	.60
13383	**Yoke** for brass tubing	Each	1.00
13385	**Gas—Sulphur Dioxide.** Liquified, in six-pound steel cylinders. Inclusive of cylinder (Cylinder not returnable)	Each	6.50



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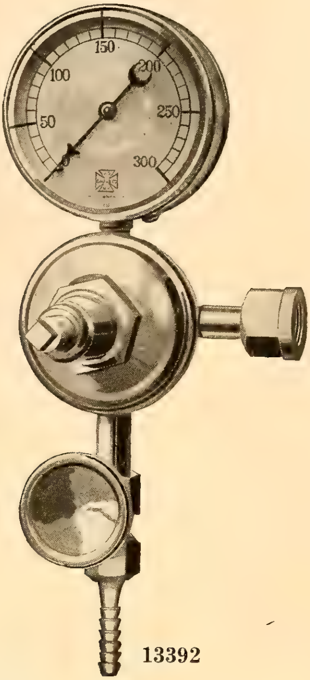
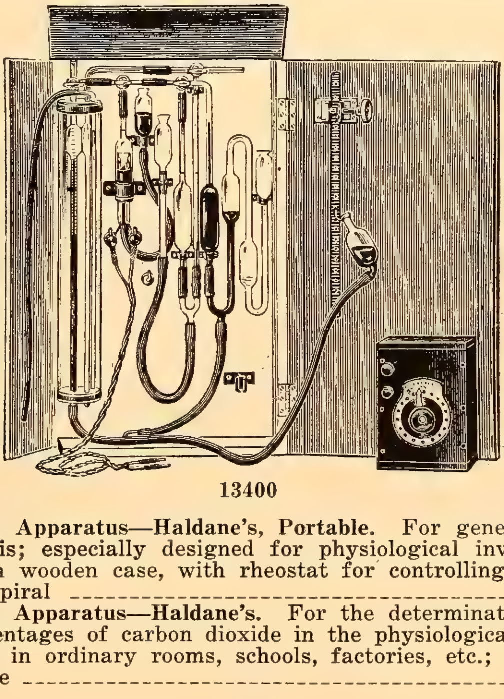


13392

13390 **Gas—Constant Pressure Regulator.** The black hand and scale indicates total residual pressure in the cylinder at all times while the red hand and scale registers the delivery pressure desired. The only regulator gauge that does not require resetting. Uniform delivery obtained regulation of reducing valve ---------------------------------Each **30.00**

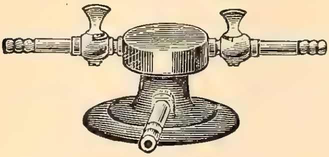
13392 **Gas—Constant Pressure Regulator.** Similar to above No. 13390, but without hand for indicating pressure of high pressure cylinders---Each **20.00**



13400

13400 **Gas Analysis Apparatus—Haldane's, Portable.** For general air and gas analysis; especially designed for physiological investigations; complete in wooden case, with rheostat for controlling current to platinum spiral --Each **57.50**

13405 **Gas Analysis Apparatus—Haldane's.** For the determination of very small percentages of carbon dioxide in the physiological investigation of air in ordinary rooms, schools, factories, etc.; complete in wooden case --Each **45.50**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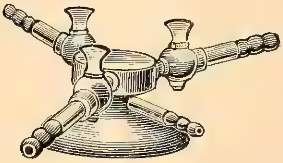
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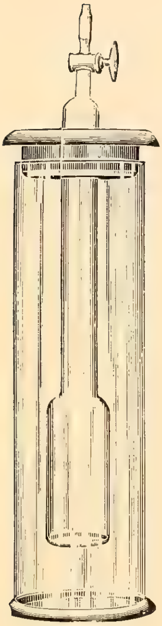
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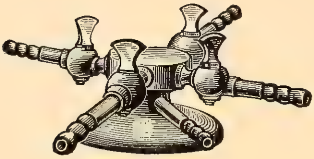
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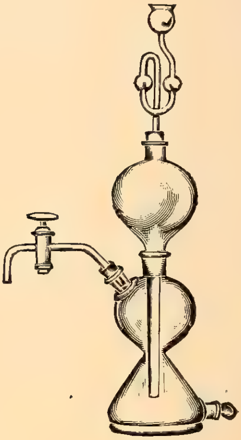
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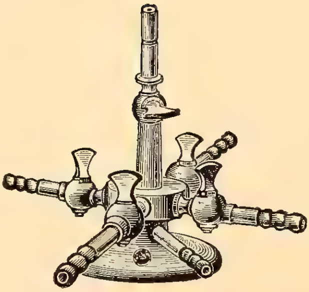
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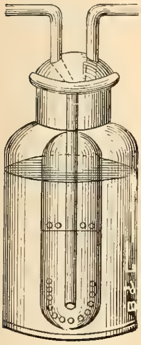
13410	**Gas Distributor.** Of brass; three-way; without stopcocks	Each	1.20
13415	**Gas Distributor.** Three-way; with two stopcocks	Each	3.60
13420	**Gas Distributor.** Four-way; with three stopcocks	Each	5.20
13425	**Gas Distributor.** Five-way; with four stopcocks	Each	6.00
13430	**Gas Distributor.** Five-way; with four stopcocks and small burner in center with stopcock	Each	7.20

3640 **Gas Generators—Kipp's.** Improved form; for the continuous generation of hydrogen sulphide, etc.; with large side opening for filling; complete with Geissler's stopcock, funnel tube, etc.

No.	A	B	C	D	E
Capacity, cc	250	500	1000	1500	2000
Each	7.00	8.25	11.00	13.00	15.00

3660 **Gas Generator—Wait's New.** For generating carbonic anhydride, hydrogen sulphide or hydrogen; consists of an outer jar for the acid liquid and an inner gas generating tube to hold the solid; latter is materially enlarged near the bottom for holding large amounts of the solid, and terminates at its top in a glass stopcock; it is securely fastened to the movable cover, forming one piece with it, and thus avoids the fitting of any cork or stopper to the generating vessel, which stopper in repeated use might allow the escape of gas, and in time exhaust the generator, one of the most objectionable features of many generators on the market; special advantages of this generator are its gas-tight reservoir, its unusually large generating tube and the simplicity of its parts, enabling the generator to be taken apart, cleaned and recharged with considerable ease; capacity, 4 liters ---------- Each 10.00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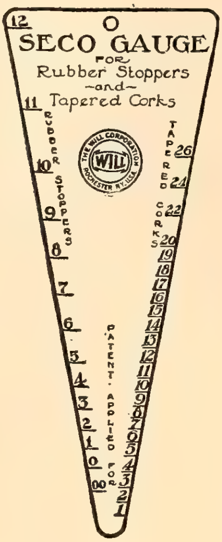

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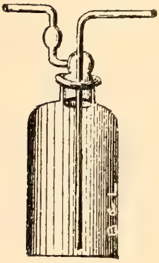
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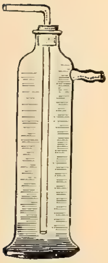
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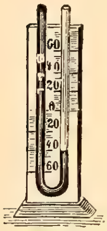

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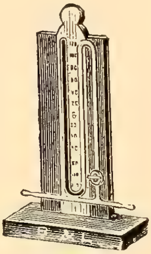
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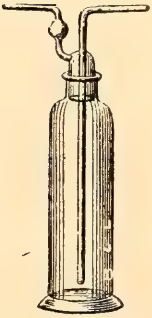

3760

3750 Gas Washing Bottles—Allihn's. Double acting.

No.	A	B	C
Capacity, cc	250	500	1000
Each	2.40	3.20	3.80

3755 Gas Washing Bottles—Bunsen's. With tube and rubber stopper.

No.	A	B	C
Capacity, cc	125	150	200
Each	.60	.75	.90

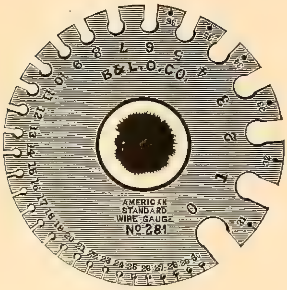
3760 Gas Washing Bottles—Dreschel's. High form.

No.	A	B	C	D
Capacity, cc	100	150	250	500
Each	1.10	1.30	1.65	2.00

3765 Gas Washing Bottles—Dreschel's. Low form.

No.	A	B	C	D
Capacity cc	100	150	250	500
Each	1.60	1.75	1.80	2.00

13436	**Gauge—For Corks and Rubber Stoppers.** Of aluminum; for determining proper size of cork or rubber stoppers for battles, flasks, etc.; for rubber stoppers fro No. 00 to 12 and cork stoppers from No. 1 to 26 ………………Each	.15
3795	**Gauge—Vacuum (Manometer).** Consists of glass U-tube on wooden support, with scale; without mercury………………Each	3.50
3800	**Gauge—Vacuum (Manometer), Bennert's.** With glass stopcock and movable scale engraved on wood; without mercury………………Each	13.50



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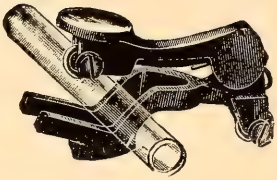

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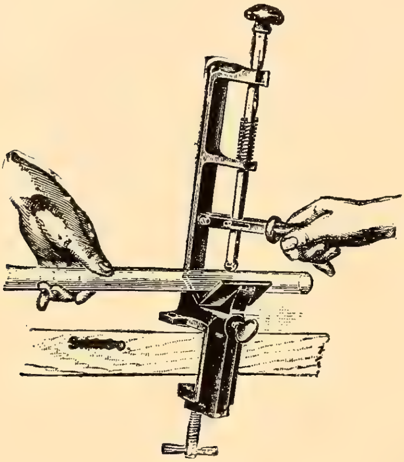
13460



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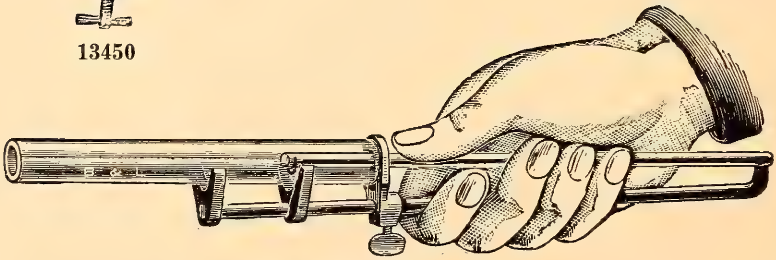
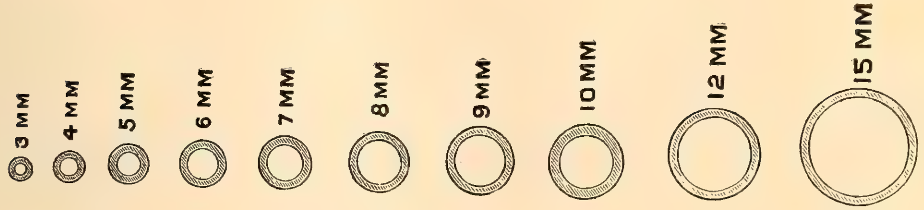


13465

13440 **Gauges—Wire.** American standard, B. & S.; of best tempered steel.

No.	A	B
Size	0 to 36	5 to 36
Each	4.50	3.60

13445	**Glass Cutter for Tubing—Griffin's.** Of brass, nickel-plated; fitted with spring, keeping it open and ready for use	Each	1.20
	Extra Cutting Wheels	Each	.12
13450	**Glass Tubing Cutter.** Substantially constructed and practical apparatus for cutting glass tubing, very useful for the laboratory; cuts absolutely even and avoids all injury to the hands	Each	8.00
	Extra Cutting Wheels	Each	.12
13455	**Glass Cutter.** Diamond; for glass plates	Each	7.20
13460	**Glass Cutter.** Steel wheel; for glass plates	Each	.20
13465	**Glass Cutter.** For tubing; cuts glass tubing of 10 mm diameter or over	Each	1.20
	Extra Cutting Wheels	Each	.15



3815 **Glass Tubing.** Of best quality, soft glass, medium wall thickness; in 5-foot lengths. (If full lengths are desired, such must be specified; otherwise shorter lengths, more convenient for packing, will be supplied.)

No.	A	B	C	D	E
Diameter, outside, mm	1½–2½	2½–3½	3–4	5–6	7-8
Per lb.	1.20	1.00	.60	.60	.60

No.	F	G	H	I	J
Diameter, outside, mm	9	10–11	12–14	15–21	22–25
Per lb.	.60	.60	.60	.60	.60

No.	K	L	M
Diameter, outside, mm	26–30	30–38	38–51
Per lb.	.70	.80	1.00

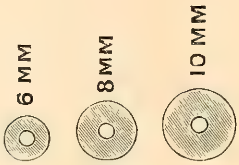
3820 **Glass Tubing—Combustion, Pyrex.** Of same composition as Pyrex chemical ware; recommended where sudden changes of temperature and mechanical strength are necessary; supplied in 3-foot lengths, unless otherwise specified.

No.	A	B	C
Approx. diam. outside, mm	4.76	4.73–12.3	12.7–18.7, incl.
Approx. wall thickness, mm	0.8	1.2	1.6
Per lb.	.64	.64	.74

No.	D	E	F
Approx. diam., outside, mm	19.1–31.4	31.8–37.7	38.1–50.4, incl.
Approx. wall thickness, mm	2.0	2.4	2.4
Per lb.	.96	1.28	1.60

No.	G	H	I
Approx. diam., outside, mm	50.8–53.6	54–63.1	63.5–69.5, incl.
Approx. wall thickness, mm	2.4	2.4	2.4
Per lb.	1.92	2.40	2.88

Our Glass Blowing Department, located within our plant, is most excellently equipped for the development and manufacture of any kind of apparatus. Repairs as well as manufacture of special apparatus will receive prompt and proper attention.



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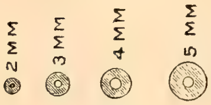


3830

3825 Glass Tubing—Barometer. Outside diameter, from 5 to 18 mm.

No.	A	B	C	D	E
Outside diameter, mm	5	6	7	8	9
Bore, mm	1	1	1	1	1
Per lb.	1.00	1.00	1.00	1.00	1.00

No.	F	G	H	I	J
Outside diameter, mm	10	11	12	13	14
Bore, mm	1	1	1	1	1
Per lb.	1.00	1.00	1.00	1.00	1.00

No.	A_2	B_2	C_2	D_2	E_2	F_2	G_2
Outside diameter, mm	9	10	11	12	13	14	15
Bore, mm	2	2	2	2	2	2	2
Per lb.	1.00	1.00	1.00	1.00	1.00	1.00	1.00

No.	A_3	B_3	C_3	D_3	E_3	F_3	G_3	H_3	I_3	J_3
Outside diameter, mm	7	9	10	11	12	13	14	15	16	17
Bore, mm	3	3	3	3	3	3	3	3	3	3
Per lb.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

No.	A_4	B_4	C_4	D_4	E_4	F_4	G_4	H_4	I_4	J_4
Outside diameter, mm	7	8	10	11	12	13	14	15	16	17
Bore, mm	4	4	4	4	4	4	4	4	4	4
Per lb.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

No.	A_5	B_5	C_5	D_5	E_5	A_6	B_6	C_6	D_6	E_6
Outside diameter, mm	12	13	14	15	16	12	13	14	15	17
Bore, mm	5	5	5	5	5	6	6	6	6	6
Per lb.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

No.	A_7	B_7	C_7	D_7	E_7	F_7	A_8	B_8	C_8
Outside diameter, mm	13	14	15	16	17	18	15	17	18
Bore, mm	7	7	7	7	7	7	8	8	8
Per lb.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

3830 Glass Tubing—Capillary. Outside diameter, from 5 to 7 mm.

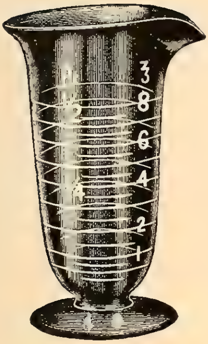
No.	A	B	C	D
Diameter of bore, mm	¼	½	¾	1
Per lb.	1.00	1.00	1.00	1.00

3835 Glass Rod. Of best glass, easily melted; diameters ranging, as indicated below.

No.	A	B	C	D	E
Diameter, mm	2–3	3	4–5	6–7	8–13
Per lb.	.65	.65	.65	.65	.65

3840 Glass Stirring Rods. With ends properly rounded to prevent scratching.

No.	A	B	C	D	E	F	G
Length, mm	100	125	150	200	250	300	375
Diameter, mm	3	5	6	6	6	8	9
Per Doz.	.25	.32	.40	.60	.75	1.30	1.50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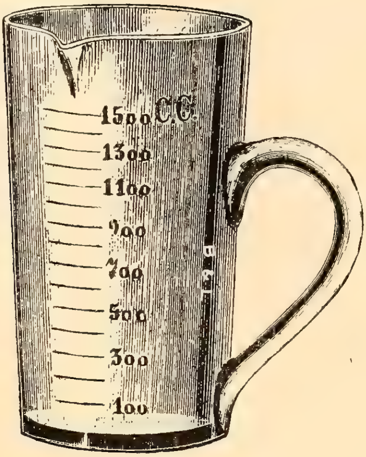

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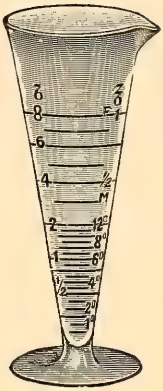

3865

3845 **Graduates—Glass.** Conical; of ordinary accuracy; graduated in cubic centimeters.

No.	A	B	C	D	E	F
Capacity, cc	5	10	15	30	60	90
Each	.40	.50	.36	.38	.42	.45

No.	G	H	I	J	K	L
Capacity, cc	120	150	250	350	500	1000
Each	.50	.60	.65	.90	1.05	1.85

3850 **Graduates—Glass.** Conical; graduated in ounces.

No.	A	B	C	D	E	F
Capacity, drams	1	2	oz. ½	1	2	3
Each	.42	.50	.30	.35	.36	.40

No.	G	H	I	J	K	L
Capacity, oz.	4	6	8	12	16	32
Each	.45	.50	.55	.75	.90	1.50

3855 **Graduates—Glass.** Conical; of ordinary accuracy; graduated in ounces and cubic centimeters.

No.	A	B	C	D	E	F
Capacity, drams	1	2	oz. ½	1	2	3
Capacity, cc	5	10	15	30	60	90
Each	.52	.60	.45	.48	.52	.58

No.	G	H	I	J	K	L
Capacity, oz.	4	6	8	12	16	32
Capacity, cc	120	200	250	375	500	1000
Each	.68	.80	.95	1.20	1.45	2.40

3860 **Graduate—Glass.** Conical; graduated in minims up to 120 minims and in drams up to 1 oz.; single scale ______________________________Each .60

3865 **Graduate—Glass.** Same as No. 3860 above, but with double scale__Each .75

3870 **Graduates**—Glass. Conical; with pressed lines and figures.

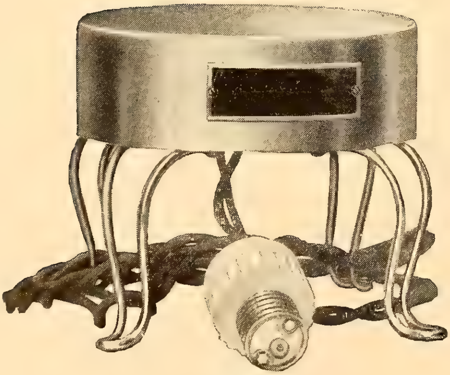
No.	A	B	C	D	E
Capacity, oz.	1	2	4	8	16
Each	.07	.10	.12	.15	.22

3872 **Graduate.** Large size; with handle; graduated with greatest accuracy; capacity, 1500 cc ____Each 1.50

13475

13475 Graduates—Seamless. Of white enameled steel; graduated on the inside in ounces and cubic centimeters.

	No. A	B	C
Capacity, cc	250	500	1000
Capacity, oz.	8	16	32
Each	**1.10**	**1.50**	**2.00**



13485

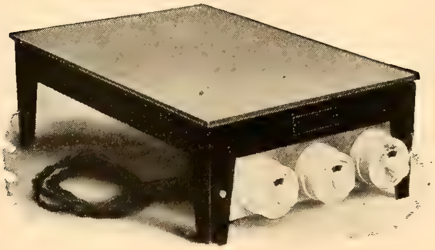
13490

13485 Hot Plate—Electric, Hoskins'. Circular, of 6-in. diameter; has pressed steel top and heavy bent wire legs; spiral resistance unit and uniform heat distribution; draws 500 watts and requires use of 5-ampere snap or knife switch; maximum temperature, 483° C (900° F); boils one liter from cold temperature in 15 minutes; furnished with 6-ft., twin-conductor, flexible cord and detachable connecter plugs____Each **8.00**

Extra Heating Unit ____Each **4.00**

13490 Hot Plate—Electric, Hoskins'. Square, 12 x 12 in.; has sheet steel top and cast-iron legs; centrally heated by spiral resistance unit, covering circular area of 5¾-in. diameter; draws 500 watts and requires 5-ampere snap or knife switch; maximum temperature in center, 260° C (500° F); at edge, 121° C (250° F); boils one liter of water from cold temperature in 15 minutes; furnished with 6-ft., twin-conductor, flexible cord and detachable connector plugs________Each **12.00**

Extra Heating Unit ____Each **4.00**

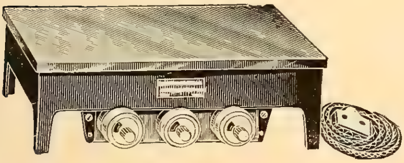


13195

13195 **Hot Plates—Electric, Hoskins'.** Oblong, with three heats; has steel top and legs; heated by renewable resistance unit, composed of three parallel windings, each controlled by a snap switch on front of plate; gives uniform heat distribution; "low" heat, 246° C (475° F) obtained with switch "1"; "medium" heat, 316° C (600° F) with switches "1" and "2"; and "high" heat, 399° C (750° F) with switches "1," "2" and "3"; high heat boils one liter of water from cold temperature in 20 minutes; requires use of double-pole knife switch of proper capacity; furnished with 6 ft., twin-conductor, flexible cord and detachable connector plug.

No.	A	B	C
Size, in.	12 x 18	18 x 24	18 x 36
Each	50.00	77.50	105.00

Extra Heating Unit -- Each 12.00



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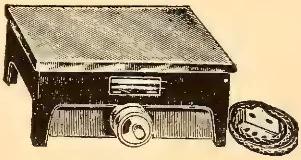
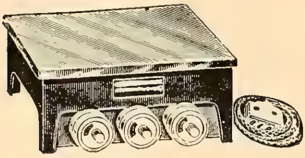


13504

Hot Plates—Electric, Multiple Unit. Units are readily renewable by operator; have structural steel bases and cast-iron tops; units are moulded "electrobestos," grooved to receive the heating elements, which are embedded in refractory cement; top plate rests on units, free from contact with base; resistor or heating wire is rated to withstand 1100° C (2012° F) for 100 hours without marked deterioration; multiple replaceable units are of advantage in permitting each hot plate to be wound for 110 and 220 volts interchangeably; all sizes give maximum temperature of 400° C (750° F), with minimum temperature of 71° C (160 F°).

13500	Size, 165 x 450 x 145 mm high; with one heat and one switch on 450 mm edge	Each	27.50
	Extra Heating Units, two per plate	Each	4.00
13502	Size, 165 x 450 x 145 mm high; with three heats and three switches mounted on 450 mm edge	Each	30.00
	Extra Heating Units, two per plate	Each	4.00
13504	Size, 305 x 305 x 145 mm high; single heat, with one switch	Each	32.50
	Extra Heating Units, two per plate	Each	4.75



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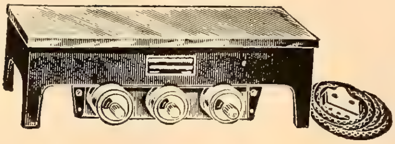

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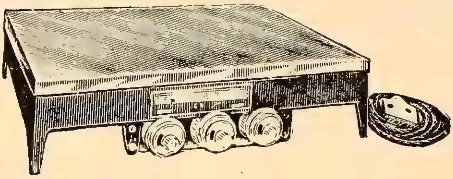
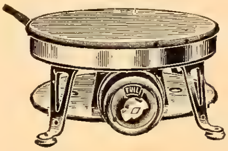


13518

13506	Size, 305 x 305 x 145 mm high; with three heats and fitted with three switches	Each	35.00
	Extra Heating Units, two per plate	Each	4.75
13508	Size, 305 x 450 x 145 mm high; single heat, without switch	Each	46.50
	Extra Heating Units, two per plate	Each	6.00
13510	Size, 305 x 450 x 145 mm high; three heats, with three switches mounted on 305 mm edge	Each	50.00
	Extra Heating Units, two per plate	Each	6.00
13512	Same as No. 13510 above, but with three switches mounted on 450 mm edge	Each	50.00
	Extra Heating Units, two per plate	Each	6.00
13514	Size, 450 x 600 x 145 mm high; single heat, without switch	Each	70.00
	Extra Heating Units, four per plate	Each	6.00
13516	Size, 450 x 600 x 145 mm high; three heats, with three switches mounted on 450 mm edge	Each	77.50
	Extra Heating Units, four per plate	Each	6.00
13518	Same as No. 13516 above, but with three switches mounted on 600 mm edge	Each	77.50
	Extra Heating Units, four per plate	Each	6.00

13525



13530

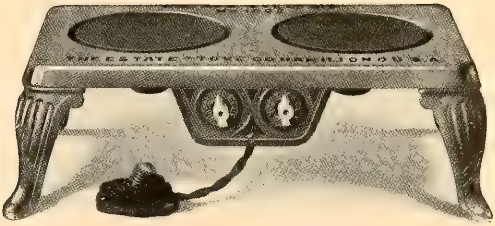
13525	**Hot Plate—Electric.** Of nickel-plated steel; single heat; diameter, 115 mm; height, 75 mm; heating element guaranteed for two years	Each	9.50

(Please state current and voltage when ordering.)

13530	**Hot Plate—Electric.** Of nickel-plated steel; equipped with three heat snap switch; heating element guaranteed for two years; diameter, 150 mm; height, 100 mm	Each	13.50

(Please state current and voltage when ordering.)

13533



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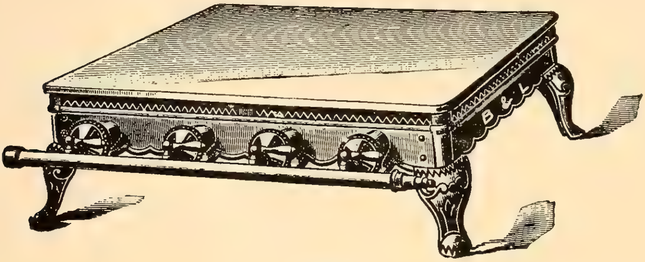


13536

13533 **Hot Plates—Electric.** For three heats; adapted for standard voltages up to 250 volts and draw from 250 to 1800 watts; circular.

No.	A	B
Diameter, mm	115	150
Each	10.00	13.00

13535 **Hot Plates—Electric.** Nickel-plated throughout and made in three sizes, with one, two and three heating plates; No. A is furnished as portable appliance, with 7½ ft. of cable and plug to be readily attached to any lamp socket; Nos. B and C are furnished with 4 ft. of absestos-covered wire and no plug.

No.	A	B	C
No. of heating plates	1	2	3
Height over all, in.	7	7	7
Width over all, in.	8½	18½	28¾
Depth over all, in.	8½	10½	14
Each	16.00	32.00	44.00

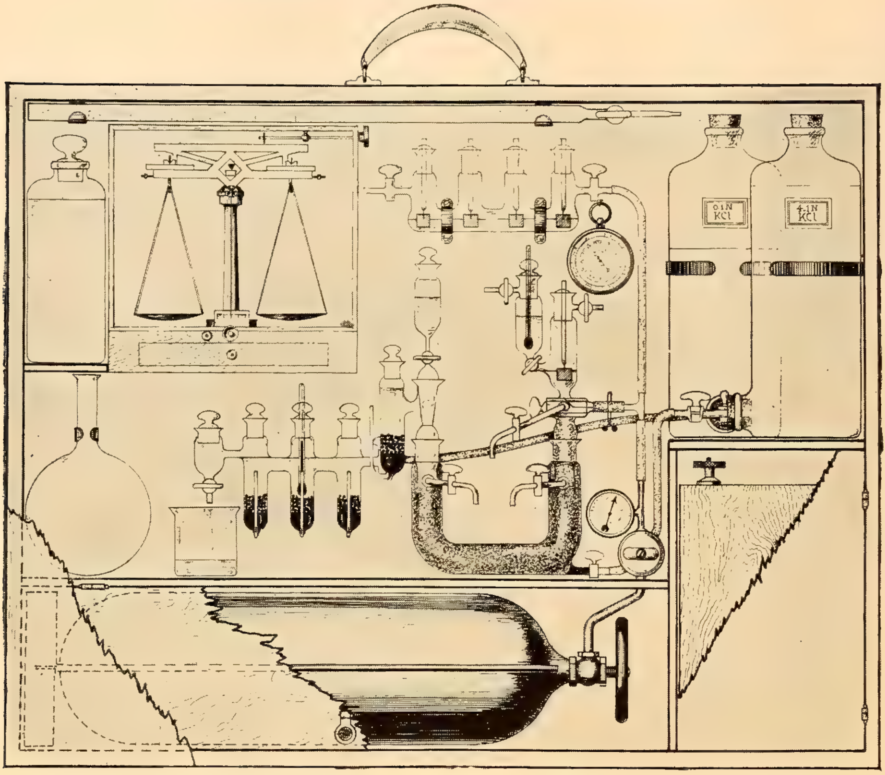
13536 **Hot Plate Burners.** With polished steel top; extra heavy.

No.	A	B	C	D	E	F	G
Length, mm	360	460	610	765	915	1220	1220
Width, mm	180	360	460	460	460	460	610
Each	9.50	16.00	22.50	29.00	35.00	58.00	81.00

METALLIC FLEXIBLE GAS TUBING

See Page 464

Hydrogen-Ion Apparatus—Acree



Following the earliest preliminary work of Ostwald, Nernst, and others, the hydrogen electrode was recognized by Acree, Lewis, Hildebrand, Sörensen, Lapworth and Denham in 1907-9 as an instrument having great future possibilities in pure and industrial organic and inorganic chemistry and in biological fields. The developments in these lines have been very extensive since that time and the equipment and the methods have now reached a high state of perfection. The researches of Acree, Humphrey and Meacham, and of Duggar and his co-workers, on the growth of fungi on culture media with regulated hydrogen ion concentration, of Clark, Rogers and others on animal bacteria, of Truog, Gillespie, Hoagland and others on soil studies, of Fred and others on soil bacteria, and of Rowntree, Folin, Van Slyke and others in biological fields, have made most important contributions showing the importance of studying every chemical and physical factor along with the strictly biological problems.

We have now made arrangements with Professor Acree to furnish the necessary equipment and highest grade of chemicals prepared with the best scientific and factory control. The following headings will indicate the scope of the lines offered and complete details and prices will be furnished upon request. A bulletin will soon be issued to cover very extensively the researches in all these fields during the last few years and to describe the best methods for use by those taking up these lines for research or teaching. We offer co-operation in devising the best methods for measuring the hydrogen-ion content of your culture media, factory liquors or any other liquids.

Portable and Routine Hydrogen Electrode Apparatus. The above cut shows the hydrogen electrode, the calomel electrode, and the connecting U tube used by Acree and Elliott for measuring the hydrogen-ion concentration of solutions. As the hydrogen electrode is kept constantly saturated with hydrogen and can be used continuously, there is no need for the expensive and inconvenient shaking device used with other electrodes. Standard ground joints make repairs easy.

Research Type of Double Hydrogen Electrode. To obviate the disadvantages of a calomel electrode, it is replaced by a comparison hydrogen electrode immersed in standard acid in a modification of the above apparatus. Ground joints with mercury seals retain the hydrogen and permit very accurate measurements.

Portable Hydrogen Electrode Setup. The above figure shows a complete portable hydrogen electrode equipment for field and factory studies containing hydrogen-ion equipment, anaeroid barometer, chemicals, storage vessels for hydrogen and calomel electrodes, burettes and stand, balance, hydrogen cylinder and pressure regulator, and storage or dry cells for potentiometer. A portable potentiometer is used but not illustrated.

Standardized Hydrogen Electrodes ready for use will be furnished already sealed in the glass stoppers fitting the hydrogen electrode apparatus.

Hydrogen Electrode Containers. Apparatus for keeping extra hydrogen electrodes saturated can now be obtained.

Standardized Calomel Electrodes of purest mercury, best calomel, and O.1N KCl or N KCl will be furnished on request.

Hydrogen Cylinders. Cylinders of any size from 4 x 12 inches to 8 x 60 inches will be furnished with regulating valves for reducing the pressure from 2000 pounds to the pressure used in the apparatus.

Constant Temperature Air Bath. We furnish an air bath for keeping the hydrogen electrode apparatus at constant temperature. This bath has glass walls and is supplied with the necessary thermoregulator, with a fan for circulating the inclosed air, and with arm holes to enable the operator to handle the apparatus and solutions inside without allowing the temperature to change.

Color Comparators. We supply a modification of the comparator of Hurwitz, Meyer and Ostenburg with Eastman Kodak Co. color filters and converging sight holes for measuring three solutions at once with high precision.

Uniform Test Tubes for Color Comparator. We furnish clear hard glass tubes with uniform diameter within 2% which give higher precision in measurements.

Buffer Salts and Acids. We furnish the list of buffer salts and acids recommended and standardized by Acree, Mellon and Avery for hydrogen electrode and colorimeter measurements. These consist of sodium or potassium pyrophosphate, sodium glycerophosphate, sodium acid phthalate, sodium acetate, sodium formate, potassium dihydrogen phosphate, disodium hydrogen phosphate, sodium sulphocarbolate, thymol, potassium chloride, malic acid, maleic acid, citric acid, aparaginic acid, and others, all of which are standardized by hydrogen electrode and colorimetric control.

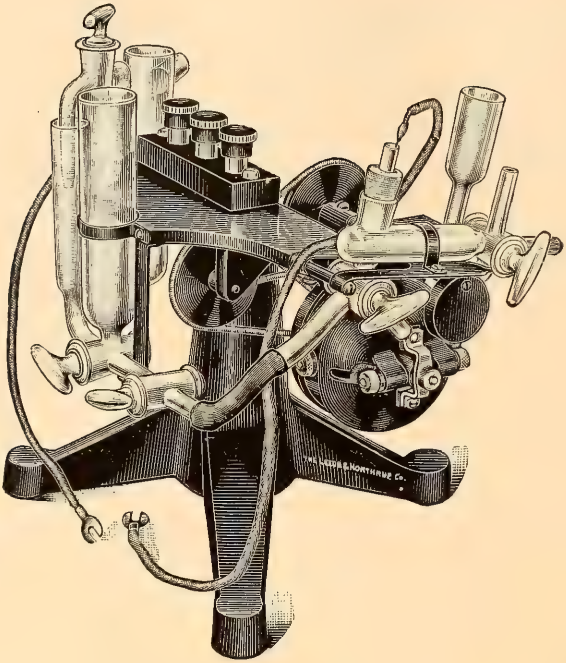
Standardized Buffer Tablets. We furnish weighed mixtures in ampules or sterilized tablets of mixtures of the above described buffers to give any desired PH value. The sterile tablets or ampule contents are added to sterilized culture media or to water to give standard PH solutions.

Standardized Buffer Tablets Containing Indicators. The above mentioned standardized sterile tablets covering any desired range of acidity can be mixed with standardized amounts of any desired indicators, especially the sulphonphthalein series, methyl red, phenolphthalein series, or others as desired.

Indicators in Tablet Form. The above indicators in standardized quantities in sterile tablet form containing neutral binders are now available and are very convenient to add to sterile culture media or other liquids to test acidity quickly.

Standardized Buffer Solutions. Acree, Mellon and Avery have developed the use of one sterile buffer solution to replace the five or six solutions used by others to cover the entire range from very acid to very alkaline reaction. Every part of the titration curve is very accurate. The buffer solution keeps indefinitely and is furnished already mixed with indicators when desired. The titration curve is furnished.

Curve Tracers and Co-ordinate Paper. We furnish curve tracers of logarithmic form, useful for drawing the titration curves of acids or of bases. We furnish also co-ordinate paper having twenty lines to the inch, corresponding to the curve tracers.



13538

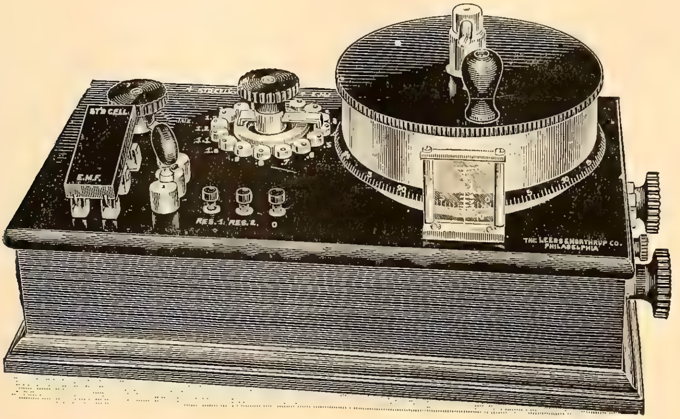
13538 **Hydrogen-ion Apparatus, Clark's.** A highly improved apparatus for work with blood, physiological fluids, culture media, etc., which greatly reduce the time required to reach equilibrium. The hydrogen electrode is mounted on a rocking device driven by a small motor. The calomel electrode is of very convenient form allowing the KCl solution to be renewed, thus counteracting the effects of diffusion and keeping the voltage of this electrode constant. Constrictions near the base of the electrode vessel prevent the disturbance of the mercury when the cell is tilted. Complete with calomel electrode, hydrogen electrode, rocking device and small motor for 110 volts ---------- Each 100.00

(Please specify whether A. C. or D. C. is to be used.)

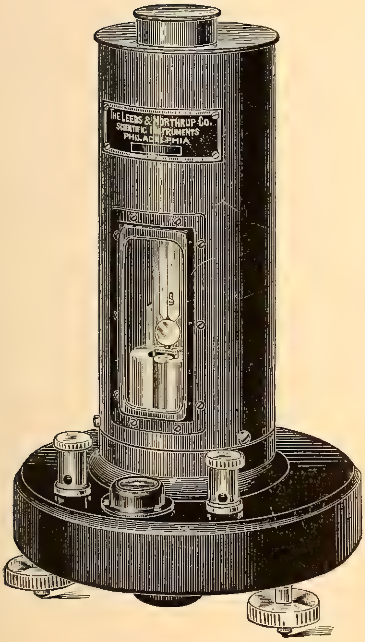
Clark Hydrogen Electrode Vessel only	Each	8.00
Platinum Electrode only	Each	3.50
Calomel Electrode Vessel only	Each	4.00
Connecting Vessel only	Each	6.75
Iron Tripod Stand with Motor, shaking device and binding posts for hydrogen electrode above	Each	75.00

INDICATORS OF CLARKAND LUBS

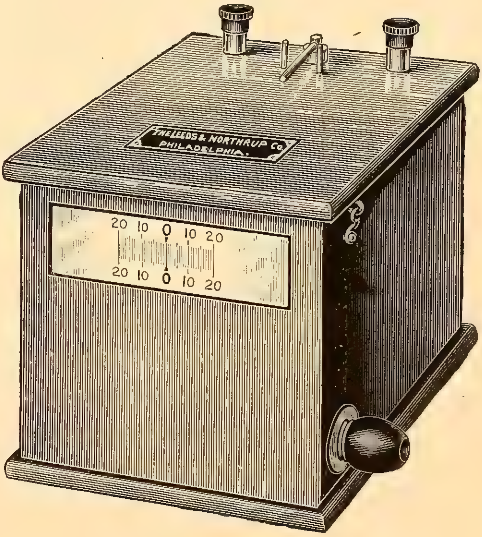
Indicators of definite P_H value are furnished dry or in solution.



13539

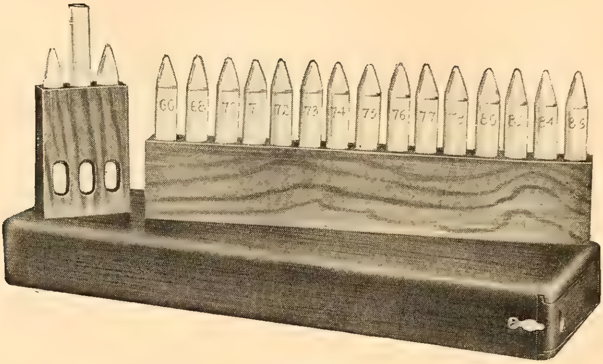


13540



13541

13539	**Potentiometer—Leeds & Northrup.** For use with the Acree and the Clark hydrogen-ion apparatus. Simple in operation, of highest accuracy with very low internal resistance and with a normal range of from .000001 volt to 16 volts and accuracy of resistances may be checked by camdium cell applied by a quick and convenient method _______________________Each	275.00
	Weston Standard Cell. For use with Potentiometer No._________Each	18.00
13540	**Galvanometer, Leeds & Northrup Type R.** Especially suited for hydrogen-ion work of precision and determination of PH values of body fluids. Resistance, 550 ohms; period, 2.5 seconds; sensitivity, 850 megohms; external critical damping resistance, 500 ohms__Each	50.00
13541	**Galvanometer, Portable Lamp and Scale Type.** For use with the Acree and the Clark hydrogen-ion apparatus. A very sensitive and convenient indicating instrument. Resistance, 1000 ohms; period, 3 seconds; sensitivity, 50 megohms; critically damped on open circuit_Each	55.00



13543

13543 **Hydrogen-Ion Concentration of the Blood Outfit.** Colorimetric method for determining variations; consists of series of standard colored liquids, contained in sealed glass tubes and marked as follows: 6.6, 6.8, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 8.0, 8.2, 8.4, 8.6; these tubes, in order to be quickly selected, are placed in wooden holder, which, together with the examination box, are carried in polished wooden case, 1⅜ x 4 x 11½ in.; glass tubing, of which the ampules are made, is non-soluble and especially selected for uniformity of diameter; stability of colors is supposedly of reasonable permanence, but, if there is evidence of fading, apparatus should be returned for examination and adjustment after six months________________Each 8.50

3875 **Hydrometers—Acid.** With Baumé scale; standard quality.

No.	A	B	C	D	E
Scale	0–70°	0–50°	0–35°	35–70°	0–25°
Divisions	1°	1°	½°	½°	¼°
Approx. length, in.	10½	10½	10½	10½	11
Each	**1.25**	**1.25**	**1.50**	**1.50**	**1.65**

No.	F	G	H	I	J
Scale	25–50°	50–70°	0–11°	9–21°	19–31°
Divisions	¼°	¼°	1/10°	1/10°	1/10°
Approx. length, in.	11	11	11	11	12
Each	**1.65**	**1.65**	**1.65**	**2.00**	**2.00**

No.	K	L	M	N
Scale	29–41°	39–51°	49–61°	59–71°
Divisions	1/10°	1/10°	1/10°	1/10°
Approx. length, in.	12	12	12	12
Each	**2.00**	**2.00**	**2.00**	**2.00**

3910 **Hydrometers—Alkali—Baumé Scale.** Standard quality; length, about 10¼ in.

No.	A	B	C
Scale	0–50°	0–25°	25–50°
Divisions	1°	½°	½°
Each	**1.25**	**1.50**	**1.50**

3985 Hydrometers—Baumé Scale. For liquids lighter than water; standard quality.

No.	A	B	C	D	E	F
Scale	100–10°	45–10°	90–45°	30–10°	40–20°	50–30°
Divisions	1°	½°	½°	¼°	¼°	¼°
Approx. length, in.	10½	11	11	11	11	11
Each	1.25	1.35	1.35	1.50	1.50	1.50

No.	G	H	I	J	K	L
Scale	60–40°	70–50°	80–60°	90–70°	100–80°	50–10°
Divisions	¼°	¼°	¼°	¼°	¼°	1/10°
Approx. length, in.	11	11	11	11	12	12
Each	1.50	1.50	1.50	1.50	1.50	1.65

No.	M	N	O	P	Q	R
Scale	30–10°	21–10°	31–19°	41–29°	51–39°	61–49°
Divisions	1/10°	1/10°	1/10°	1/10°	1/10°	1/10°
Approx. length, in.	12	12	12	12	12	12
Each	1.65	1.65	1.65	1.65	1.65	1.65

No.	S	T	U
Scale	71–59°	81–69°	91–79°
Divisions	1/10°	1/10°	1/10°
Approx. length, in.	12	12	12
Each	1.65	1.65	1.65

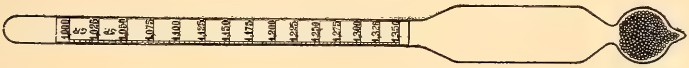
4005 Hydrometers—Baumé Scale. For liquids heavier than water; standard quality; length, about 14 in.

No.	A	B	C	D	E
Scale	0–100°	0–70°	0–50°	0–35°	0–25°
Divisions	1°	1°	1°	½°	½°
Each	1.25	1.25	1.25	1.50	1.50

No.	F	G	H	I	J
Scale	25–50°	35–70°	0–25°	25–50°	50–70°
Divisions	½°	½°	¼°	¼°	¼°
Each	1.50	1.50	1.65	1.65	1.65

No.	K	L	M	N	O
Scale	0–11°	5–15°	9–21°	19–31°	29–41°
Devisions	1/10°	1/10°	1/10°	1/10°	1/10°
Each	2.00	2.00	2.00	2.00	2.00

No.	P	Q	R	S	T
Scale	30–50°	39–51°	49–61°	50–70°	59–71°
Devisions	1/10°	1/10°	1/10°	1/10°	1/10°
Each	2.00	2.00	2.00	2.00	2.00



4190 Hydrometers—Specific Gravity. For liquids heavier than water; standard quality; length, about 12 in.

No.	A	B	C	D
Scale	1.000–2.000	1.000–1.105	1.095–1.205	1.195–1.305
Divisions	.010	.002	.002	.002
Each	1.45	1.50	1.50	1.50

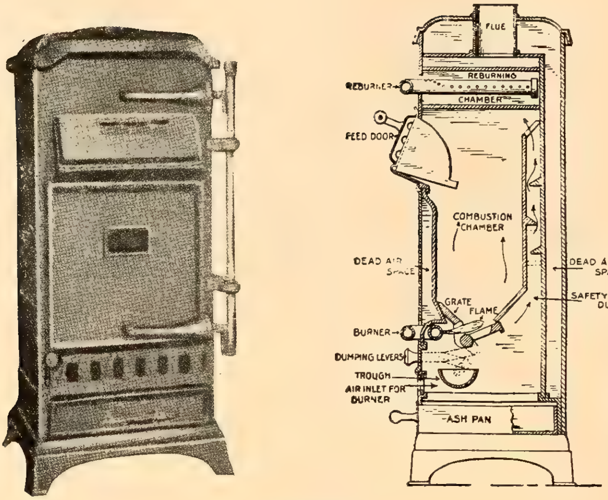
No.	E	F	G	H
Scale	1.295–1.405	1.395–1.505	1.495–1.605	1.595–1.705
Divisions	.002	.002	.002	.002
Each	1.50	1.50	1.50	1.50

No.	I	J	K
Scale	1.695–1.805	1.795–1.905	1.895–2.000
Divisions	.002	.002	.002
Each	1.50	1.50	1.50

4195 Hydrometers—Specific Gravity. For liquids lighter than water; standard quality; length, about 12 in.

No.	A	B	C	D
Scale	0.650–1.000	0.695–0.755	0.745–0.805	0.795–0.855
Divisions	.005	.001	.001	.001
Each	1.45	1.50	1.50	1.50

No.	E	F	G
Scale	0.845–0.905	0.895–0.955	0.945–1.000
Divisions	.001	.001	.001
Each	1.50	1.50	1.50



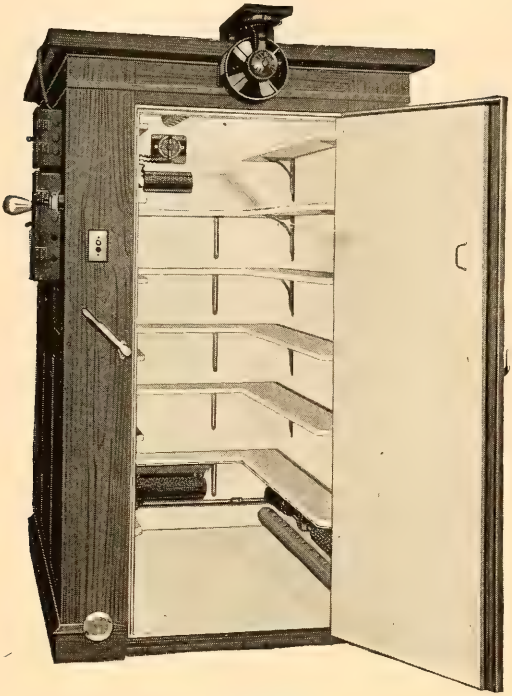
13544

13544 **Incinerator—Rickett's.** Very convenient for the disposition of laboratory and dissecting room refuse, especially infected animal carcasses and similar material; arrangement of combustion chamber and burner insures drying of wet compact refuse by allowing air to pass through it till it is finally consumed; any drip or liquid is caught in trough below burner; asbestos lining prevents it from heating room; small size has single grate and large size two grates supplied with full directions for installation and operation.

No.	A	B
Size	Small	Large
Outside dimensions, in.	15 x 11 x 37	18 x 18 x 49
Capacity of combustion chamber, cu. in.	1412½	2825
Each	**60.00**	**90.00**

The disposal of waste and garbage is one of the most serious problems that confront hospitals and public institutions. There is but one safe and sanitary method of disposal and that is incineration at the place where waste originates.

We can supply incinerators for hospitals and institutions.



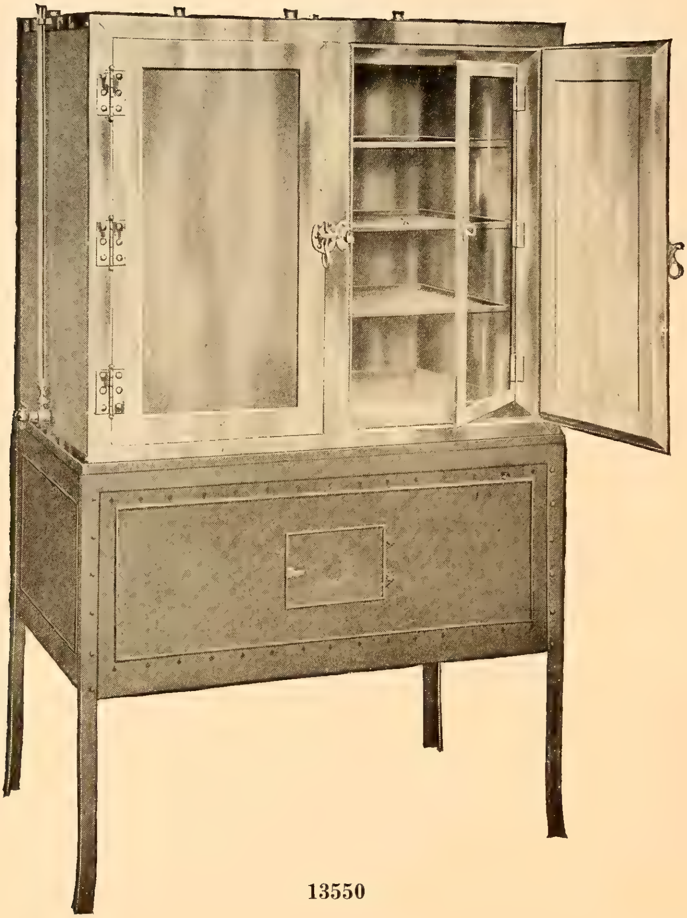
13545

13545 **Incubator Room.** Electrically heated, ventilated and automatically controlled; will maintain constant temperature of 37½° C; inside dimensions; height, 7 ft.; width, 4 ft.; depth, 6 ft.; walls made from alternating layers of two thicknesses of ¾-in. wood flooring and one thickness of 1-in. cork, with intervening layers of building paper; heating medium consists of five heating stoves, controlled by solenoid, which in turn is controlled by electro-thermostat, actuated by stove mounted underneath; ventilating system consists of ventilating fan and three ventilating pipes, two being installed at the bottom, beneath the heating stoves, while the third is near the ceiling, terminating in hood containing fan; fan is indirectly connected with thermostat and controlled by same; so constructed that it may be taken apart for shipment; maximum current consumption, 6 ampéres ---Each **1100.00**

Note.—Incubator Rooms of other dimensions can be furnished on short notice. Estimates will be submitted on receipt of specifications.

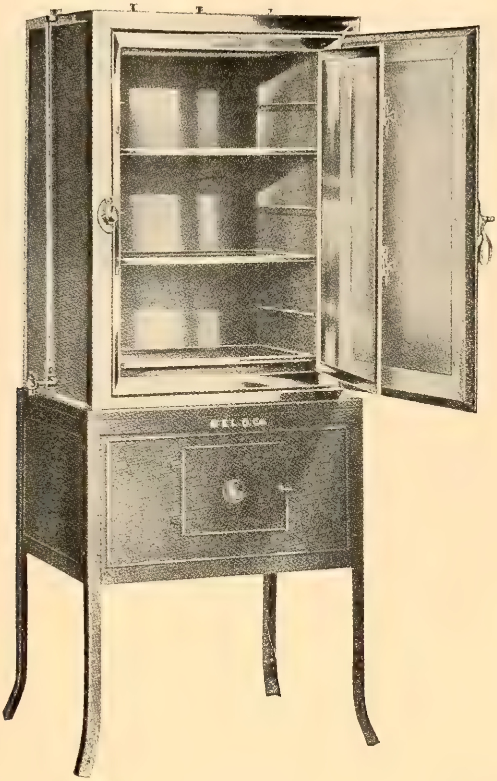
BIOLOGICAL EQUIPMENT

The demands of research workers are fully met by the grade of materials supplied by us.



13550

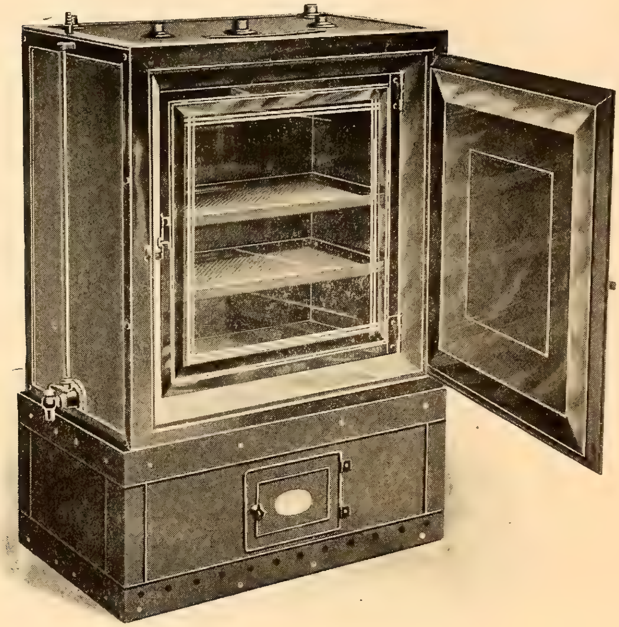
13550	**Incubator—Laboratory.** For gas; designed for the use of laboratories where a large amount of material is handled at one time; has three walls and double doors, inner doors being of glass; supported on an iron stand, 75 cm high; sheet iron enclosure for the two Koch's safety burners; outside dimensions: height, 75 cm; width, 90 cm; depth, 57 cm; inside dimensions: height, 63 cm; width, 75 cm; depth, 45 cm; without equipment	Each	269.00
13555	**Incubator—Laboratory.** For gas; same as No. 13550 above, but with equipment consisting of two Koch's safety burners, large size, Roux' bimetallic regulator, large size, incubator thermometer, graduated 0° to 50°C, and 6 ft. of metallic tubing	Each	306.25
13560	**Incubator—Laboratory.** For electricity; same as No. 13550 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50°C	Each	344.00
13565	**Incubator—Laboratory.** For gas; same as No. 13550 above, but with outside dimensions: height, 60 cm; width, 90 cm; depth, 47 cm; inside dimensions: height, 45 cm; width, 75 cm; depth, 35 cm; without equipment	Each	230.00
13568	**Incubator—Laboratory.** For gas; same as No. 13565 above, but with equipment as outlined under No. 13555	Each	267.2
13571	**Incubator—Laboratory.** For electricity; same as No. 13565 above, but with equipment as outlined under No. 13560	Each	300.00



13575

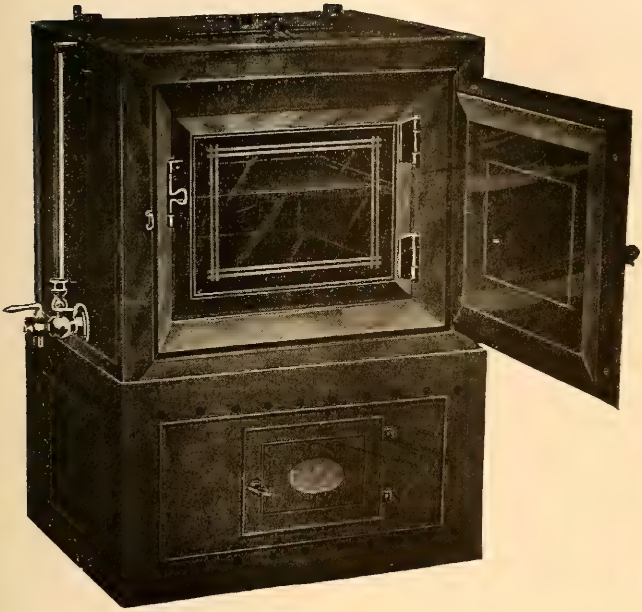
13575	**Incubator—Laboratory.** For gas; of construction similar to that of preceding incubators, but with dimensions such as to put it in the class of high form incubators; will be found most convenient, where tall jars and other apparatus are to be placed vertically for any work; outside dimensions: height, 85 cm; width, 63 cm; depth, 49 cm; inside dimensions: height, 70 cm; width, 45 cm; depth, 35 cm; without equipment --Each	220.00
13579	**Incubator—Laboratory.** For gas; same as No. 13575 above, but with equipment consisting of one double Koch's safety burner, large size, Roux' bimetallic regulator, large size, incubator thermometer, graduated 0° to 50°C, and 6 ft. of metallic tubing------------Each	254.00
13582	**Incubator—Laboratory.** For electricity; same as No. 13575 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50°C--------------------------------------Each	274.00

STAINS — REAGENTS BIOLOID BIOLOGICALS — CHEMICALS



13586

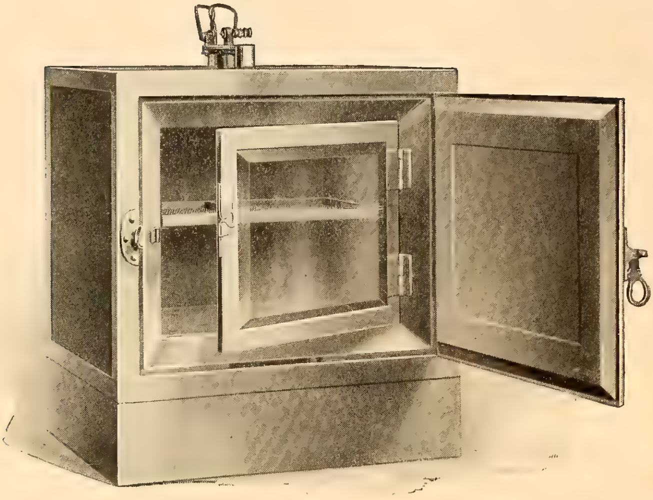
13586	**Incubator—Laboratory.** For gas; outside dimensions: height, 65 cm; width, 63 cm; depth, 49 cm; inside dimensions: height, 48 cm; width, 45 cm; depth, 35 cm; without equipment	Each	155.00
13589	**Incubator—Laboratory.** For gas; same as No. 13586 above, but with equipment consisting of one Koch's safety burner, large size, Roux' bimetallic regulator, large size, incubator thermometer, graduated 0° to 50°C, and 6 ft. of metallic tubing	Each	180.50
13592	**Incubator—Laboratory.** For electricity; same as No. 13586 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50°C	Each	224.00
13595	**Incubator—Laboratory.** For gas; outside dimensions: height, 65 cm; width, 63 cm; depth, 37 cm; inside dimensions: height, 48 cm; width, 45 cm; depth, 24 cm; without equipment	Each	133.00
13598	**Incubator—Laboratory.** For gas; same as No. 13595 above, but with equipment consisting of one Koch's single safety burner medium size, Roux's bimetallic regulator small size, incubator thermometer, graduated 0° to 50°, and 6 ft. of metallic tubing	Each	152.25
13601	**Incubator—Laboratory.** For electricity; same as No. 13595 above, but with equipment as outlined under No. 13592	Each	197.00
13604	**Incubator—Laboratory.** For gas; similar in design, construction and materials to preceding, but of taller form as compared with other dimensions; outside dimensions: height, 65 cm; width, 47 cm; depth, 37 cm; inside dimensions; height, 48 cm; width, 30 cm; depth, 24 cm; without equipment	Each	115.00
13607	**Incubator—Laboratory.** For gas; same as No. 13604 above, but with equipment consisting of one Koch's safety burner, medium size, Reichert's thermo-regulator, incubator thermometer, graduated 0° to 50°C, and 6 ft. of metallic tubing	Each	127.75
13610	**Incubator—Laboratory.** For electricity; same as No. 13604 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50°C	Each	173.00

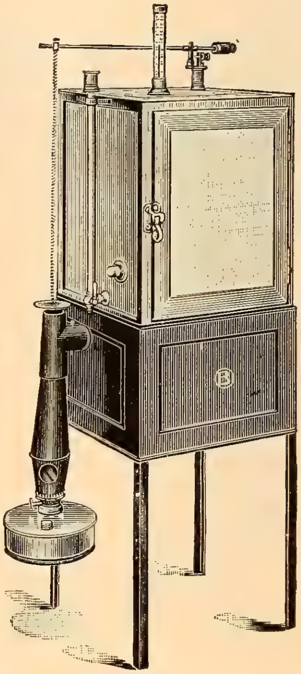


13613

13640

13613	**Incubator—Laboratory.** For gas; designed particularly for the use of small laboratories and for individuals—the smallest size regularly furnished with an inner glass door; outside dimensions: height, 40 cm; width, 47 cm; depth, 38 cm; inside dimensions: height, 24 cm; width, 30 cm; depth, 24 cm; without equipment ---------------Each	76.50
13616	**Incubator—Laboratory.** For gas; same as No. 13613 above, but with equipment consisting of one Koch's safety burner, medium size; Reichert's thermo-regulator, incubator thermometer, graduated 0° to 50°C, and 6 ft. of metallic tubing------------------------------Each	89.25
13619	**Incubator—Laboratory.** For electricity; same as No. 13613 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50°C --Each	137.00
13622	**Incubator—Laboratory.** For gas; of same construction and materials as preceding, but differing in size and has no inner glass door; outside dimensions: height, 34 cm; width, 26 cm; depth, 23 cm; inside dimensions: height, 24 cm; width, 16 cm; depth, 16 cm; without equipment -- Each	56.00
13625	**Incubator—Laboratory.** For gas; same as No. 13622 above, but with equipment consisting of one Koch's safety burner, medium size; Reichert's thermo-regulator, incubator thermometer, graduated 0° to 50°C, and 6 ft. of metallic tubing------------------------------Each	68.75
13628	**Incubator—Laboratory.** For electricity; same as No. 13622 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50°C --Each	111.00
13640	**Incubator—Physicians'.** Primarily designed for use of physicians desiring to make but a few cultures at a time, but also very serviceable where individual apparatus is assigned for the use of the members of a large laboratory class; made of polished copper, with double walls and covered with heavy insulating material; has one-inch water space, gauge and faucet and tubulations for thermometer and thermo-regulator; entire incubator can be readily cleaned; furnished with sheet-iron case, 8 in. high, and asbestos mat; without equipment------Each	24.00
13643	**Incubator—Physicians'.** Same as No. 13640 above, but with gas equipment consisting of one Bunsen micro burner, Reichert's thermo-regulator, incubator thermometer, graduated 0° to 50° C, and 6 ft. of metallic tubing ---Each	31.20
13646	**Incubator—Physicians'.** Same as No. 13640 above, but electrically heated and controlled and with incubator thermometer, graduated 0° to 50° C. **(Please state voltage and current when ordering)**--Each	79.00





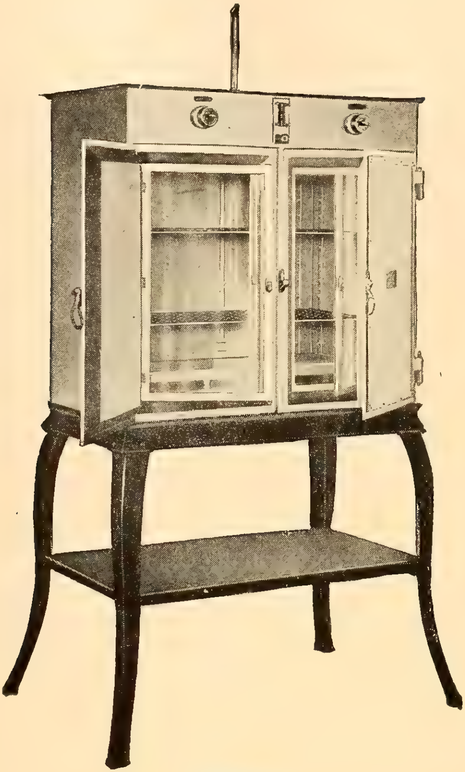
13648

13648 **Incubator—Bacteriological.** Oil-heating, new construction insuring uniform temperature, with automatic heat regulator, very reliable, operating within one-half degree; has three walls of highly polished copper, having both air and water space, outer surface being covered with insulating material to insure even temperature and exposed parts lacquered to prevent tarnishing; provided with two doors, inner one of beveled glass to permit examination of cultures without disturbing temperature; has one shelf, and stand is 25 in. high; outside dimensions: height, 17 in.; width, 14 in.; depth, 13 in.; inside dimensions: height, 12 in.; width, 9 in.; depth, 9 in.; can be used with gas by replacing oil lamp with Bunsen burner____________________Each 105.00

13650 **Incubators—Electric, U. S. Navy Pattern.** Originally designed to meet specifications issued by the U. S. Navy; in place of water jacket surrounding incubating chamber in standard design, there is a thick wall of special insulating material, effectively preventing radiation of heat; has unique method of heating and circulating the air in chamber, giving more uniform and constant temperature than the older method and permitting the use of the full capacity of chamber; temperature is kept constant within ½° by automatic regulator, which may be set for any degree between 30° and 50°C and is of simple metal design, with nothing to get out of order; inner walls and frame made of heavy copper; has two doors, inner of glass; has water-proof covering with copper-bound edges on outside; furnished complete with regulator, thermometer and 6 ft. of cord.

No.	A	B	C
Height, inside, cm	48	48	24
Width, inside, cm	46	31	31
Depth, inside, cm	24	24	24
Each	140.00	124.00	95.50

Dehydrated Culture Media — Nutrient Materials — Rare Sugars
See Chemical Supplement

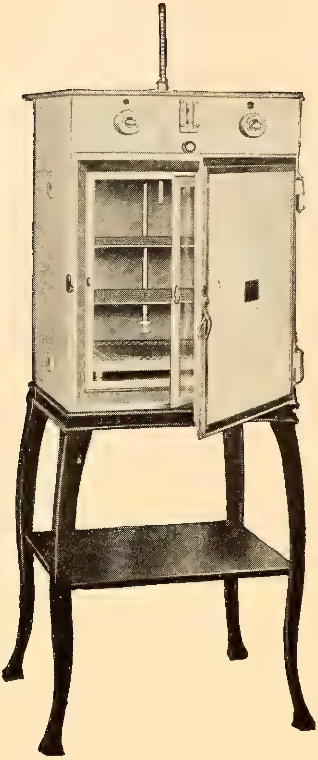


13655-60

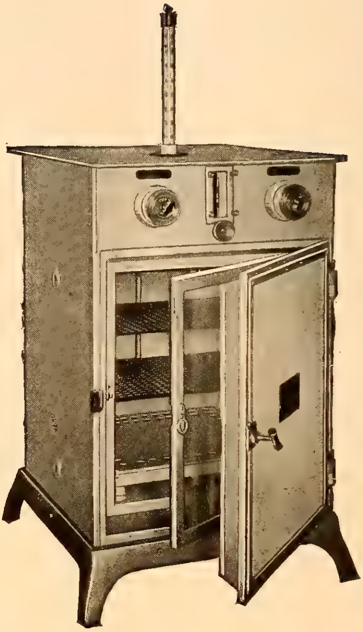
13655 **Incubator—Electric, Freas.** Constructed of heavy asbestos wood, with cast aluminum door and door frame; air space between inner and outer walls is filled with insulating material; interior is fitted with aluminum racks, allowing the perforated metal shelves to be placed at any desired height; has an inner door of heavy glass, fitted in an aluminus frame, cushioned with felt to exclude the air, permitting inspection of the chamber without disturbing the temperature; has opening through top for a thermometer and two snap switches, one for the current and one for lamp illuminating the chamber; supplied with flexible cord and plug to fit ordinary lighting circuit, and high-grade thermometer of special design, with graduations to 70°C; presents following advantages:

1. Accuracy of "all metal" regulating device, which maintains constant temperature to fraction of a degree; continuous test at 37½°C for forty days showed fluctuations of temperature to be scarcely perceptible.
2. Ease of setting for the temperature desired, requiring but a few seconds of time; accomplished by simply turning a milled-head screw, which moves indicator up or down the graduated temperature scale.
3. Absence of complicated devices for heating, regulation, etc.; rugged construction of all parts is such that, with ordinary care, no parts are likely to get out of order.
4. Water is not required, nor employed, to maintain even temperature throughout chamber, thereby eliminating leakage.
5. No auxiliary devices needed; to operate, it is only necessary to screw the plug into a lamp socket and turn on the current; operates on either direct or alternating current.

Incubator is of durable and handsome construction; mounted on heavy iron stand base with legs; dimensions: height, 62½ cm; with, 100 cm; depth, 45 cm ....Each 335.00



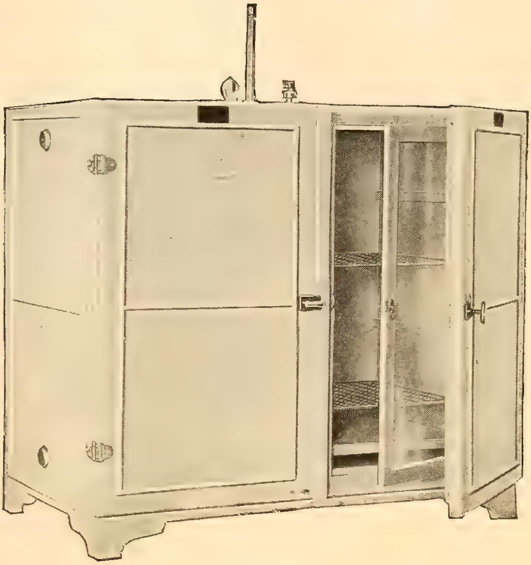
13665-70



13675

13660	**Incubator—Electric, Freas.** Same as No. 13655 above, but of the following dimensions: height, 55 cm; width, 65 cm; depth, 35 cm__Each	285.00
	Note: If desired for use with large receptacles, the above incubator can be furnished, at no additional cost, without the center column of the door frame, with the divided door matching in the center.	
13665	**Incubator—Electric, Freas.** Same construction as No. 13655 above, but with single doors, as shown in illustration, and of the following dimensions: height, 50 cm; width, 45 cm; depth, 40 cm______Each	225.00
13670	**Incubator—Electric, Freas.** Same as No. 13655 above, but of the following dimensions: height, 40 cm; width, 40 cm; depth, 35 cm__Each	200.00
13675	**Incubator—Electric, Freas.** Same construction as No. 13655 above, but on iron base to stand on table, and of the following dimensions: height, 30 cm; width, 30 cm; depth, 30 cm____________________Each	120.00

The demand for "Bioloid" Stains, Reagents and Biological Products is evidence of the high quality of these materials



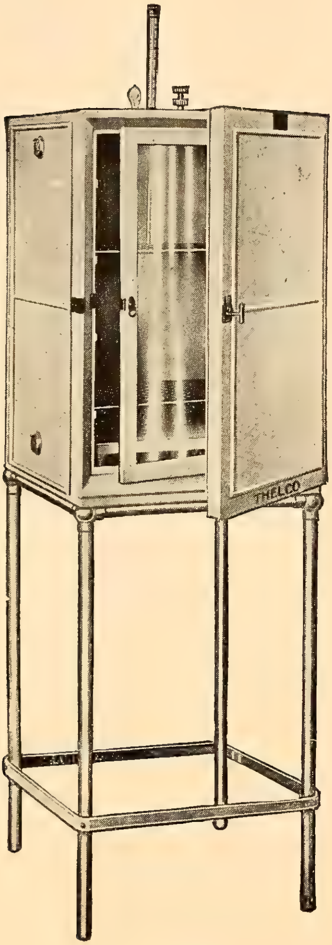
13680

13680 Incubators—Bacteriological, Thelco. Of durable construction, with inside walls, top and bottom, of asbestos transite, outer walls and top of high-grade washable insulating material, the space between inner and outer walls being filled with air-cell insulation, giving walls more than two inches in thickness and insulated to marked degree of efficiency; interior finished in light gray mineral paint, sanitary and heat-resisting; outside finish of white laboratory enamel, which can be kept clean with a moist cloth; inner glass door provided to allow inspection of contents without disturbing temperature of chamber; pilot lamp is fitted outside incubator to enable operator to adjust regulator quickly to desired temperature without opening incubator; two adjustable aluminum ventilators are placed on each side, one near top and other near bottom, communicating with interior by means of aluminum bushing; heating element, removable and covering bottom of chamber, is made of asbestos transite and wound with special resistance wire, cannot get out of order or burn out, so that incubator can be depended upon to run indefinitely without attention; Thelco bimetallic thermostat, the control element, is of durable metallic construction, will maintain the temperature indefinitely to within a half-degree of that desired, giving a range of temperature from that of the room to 60°C; when thermostat has been adjusted at desired temperature, it can be locked, preventing "creeping" either up or down; each incubator is equipped with two shelves, adjustable as to height; cost of operating incubator at ordinary room temperature, at the highest commercial rate of electricity, is only fraction of a cent per hour; stand, furnished on the incubators indicated below, is of iron pipe, finished in white laboratory enamel; distinctive advantages of this incubator are:

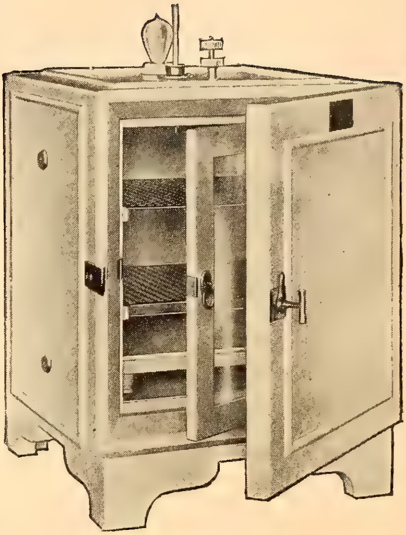
1. Continuous darkness of chamber.
2. Even distribution of heat.
3. Constancy of temperature.
4. Operates equally well on either A. C. or D. C.
5. Operates equally well on either 110 or 220-volt circuit without change or adjustment.
6. Exterior temperature adjustment.
7. Dependability.

Inside dimensions: height, 71 cm; width, 92 cm; depth, 46 cm.

No. A.	Without stand	Each	135.00
No. B.	With stand	Each	155.00



13685



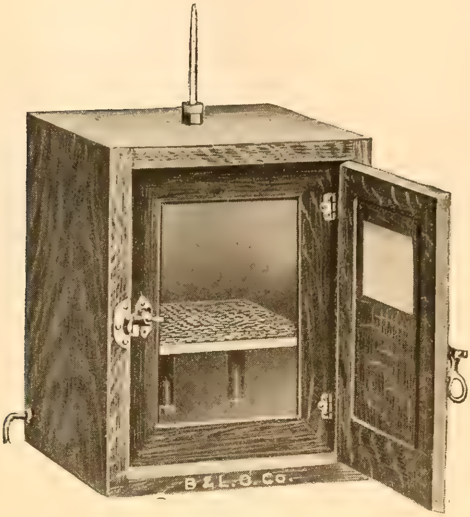
13690

13685 **Incubators—Bacteriological, Thelco.** Same as No. 13680 above, but with single door and of the following dimensions, inside: height, 66 cm; width, 46 cm; depth, 46 cm.

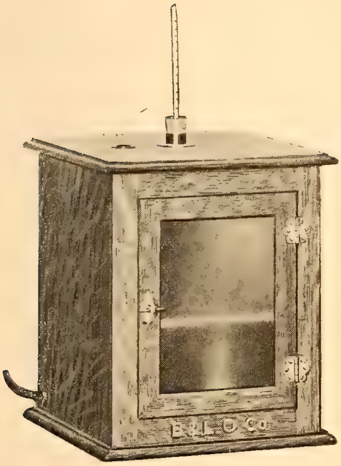
No. A.	Without stand	Each	**95.00**
No. B.	With stand	Each	**115.00**

13690 **Incubator—Bacteriological, Thelco.** Same as No. 13680 above, but on cast iron base for use on any laboratory table, and of the following dimensions, inside: height, 31 cm; width, 31 cm; depth, 31 cm ---------- Each **65.00**

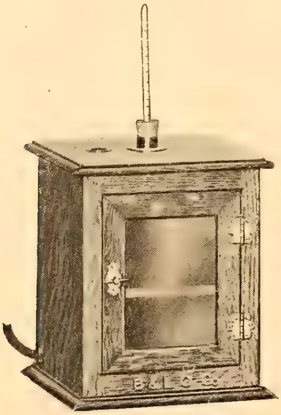
Bacteriological Glassware is Described in this Catalogue.
For other Glassware see our Glassware Catalogue.



13695-D



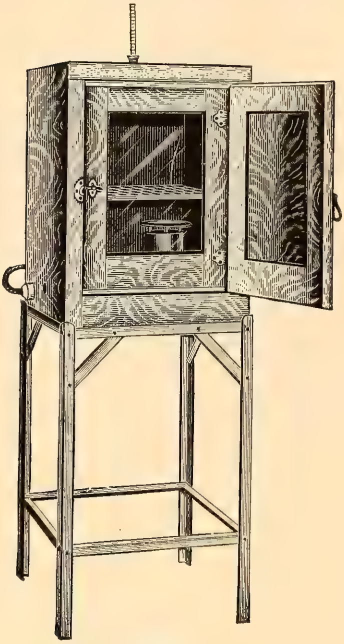
13695-B



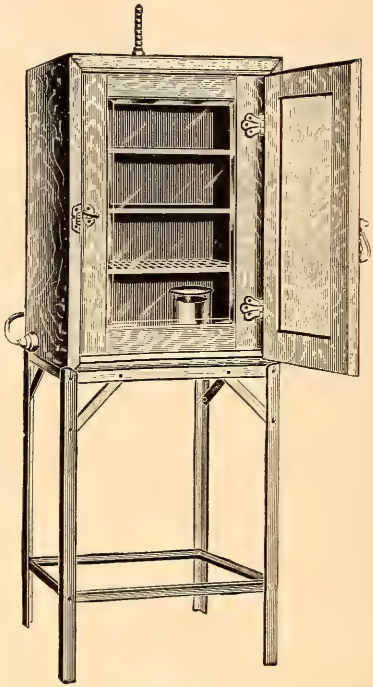
13695-A

13695 **Incubators—Electric.** Made of well seasoned oak, neatly finished and thoroughly insulated with layers of transite, tar paper, animal hair, tar paper and wood; in first two cabinets listed below wood is single ply, in others five-ply; all models are controlled by newly designed electro-thermostat and can be operated by simply connecting with any electric light socket; provided with Centigrade thermometer and one wire screen shelf; No. A has single door with blue glass and is heated by 8 c. p. lamp; No. B is popular size for small laboratory, has single door with blue glass and is heated by two lamps; No. C is recommended for medium size laboratory, has double doors, the inner of glass, and is heated by three lamps; No. D is suitable for large laboratories and hospitals, has double doors, the inner fitted with beveled plate glass, and is heated by two 16 c. p. lamps, provided with steel chimneys for protection.

No.	A	B	C	D
Height, inside, cm	23	31	38	66
Width, inside, cm	18	23	31	46
Depth, inside, cm	18	23	27	46
Each	**26.00**	**32.00**	**50.00**	**80.00**



13700



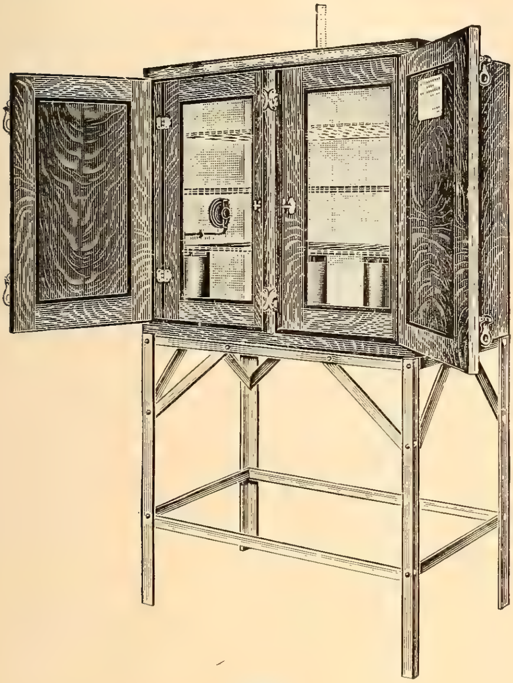
13705

13700 **Incubator—Electric.** Same as No. 13695-D, but mounted on iron stand -- Each **92.50**

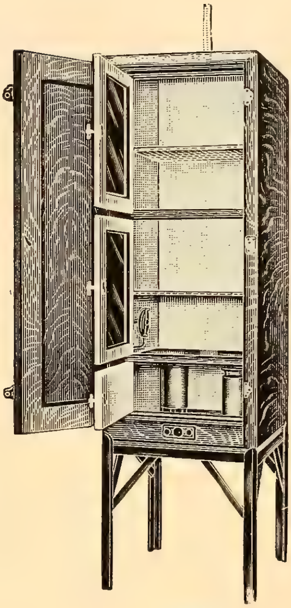
13705 **Incubators—Bacteriological, Electric (Anhydric).** Made of well seasoned quarter-sawed oak, of five-ply construction, and finished in attractive hand-rubbed light oak; insulation consists of tar paper, animal hair and transite; regularly heated by electric carbon lamps, which heat and cool quickly and are easily exchanged, provided with steel chimneys for protection and for promoting even distribution of heat; if desired, can be furnished with pilot lamps, instead of carbon, at same cost; heat is automatically controlled for temperature of 37½°C by electro-thermostat, built upon principle of unequal expansion of substances when heated; incubators are so ventilated that there is a continuous current of air within chamber, thus keeping temperature uniform in all working parts of apparatus; condenser, located in base of thermostat, prevents arcing at contact points when circuit is broken, provided electric current passing through same does not exceed three amperes; maximum current consumption of models below, one ampere; provided with three shelves and one door; inside dimensions: height, 75 cm; width, 50 cm; depth, 45 cm.

No. A.	Without stand	Each	**100.00**
No. B.	With stand	Each	**112.50**

Do you know that gas-operated ovens and incubators may be "electrified"? Write to us for information.



13720

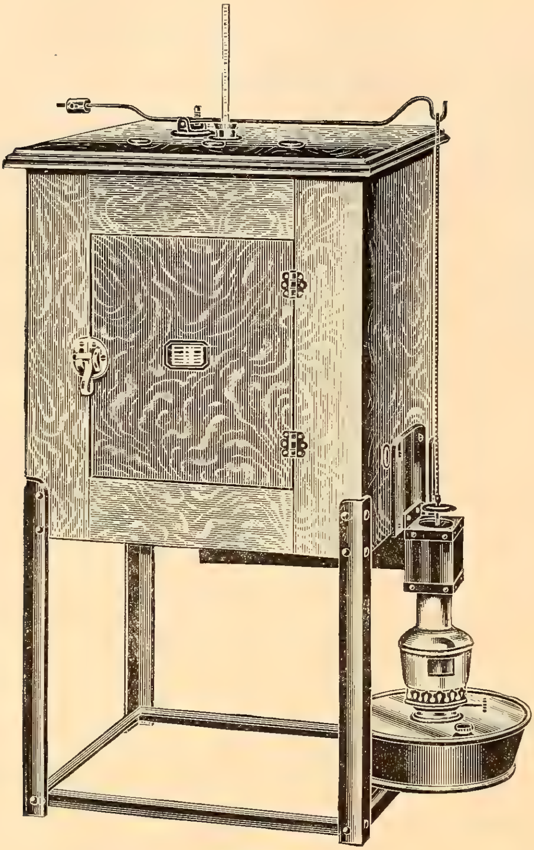


13725

13715	**Incubator—Electric.** An excellent incubator for research laboratories; has two double doors, inner fitted with beveled plate glass; heated by three 32 c. p. lamps, provided with steel chimneys for protection and controlled by electric thermostat; equipped with three wire screen shelves and Centigrade thermometer; inside dimensions: height, 76 cm; width, 92 cm; depth, 46 cm; without stand Each	**190.00**
13720	**Incubator—Electric.** Same as No. 13715 above, but on stand Each	**205.00**
13725	**Incubator—Electric.** A very convenient incubator where large incubating space is desired on a small floor area; has two inside doors, fitted with beveled plate glass, and one outside door; heated by two 32 c. p. lamps with steel chimneys and thermostat; provided with four wire screen shelves, having distance of 10 in. between, and a Centigrade thermometer; angle iron stand, 50 cm high, is included, as illustrated; inside dimensions: height, 127 cm; width, 46 cm; depth, 46 cm Each	**175.00**

LABORATORY HARDWARE

See the index for the complete line we offer.



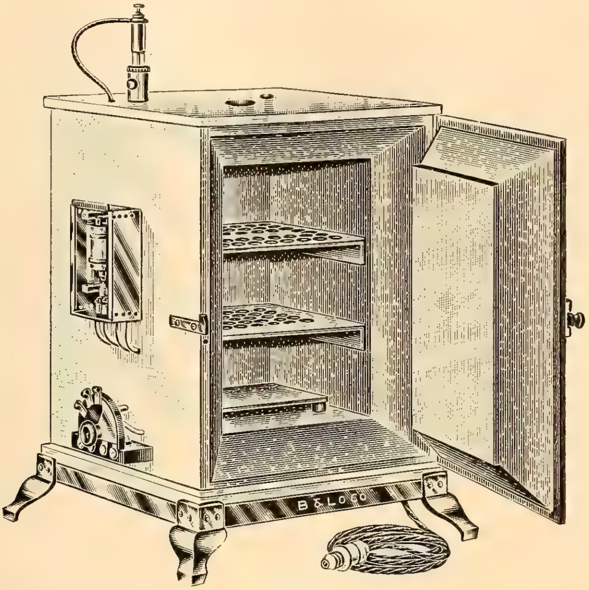
13740

13740 Incubators—Bacteriological, Oil-Heated. Designed for field service and for use wherever electric heating facilities are not available; allow a control within ½°C, when maintaining temperature of 37½°C; made of well seasoned 5-ply oak, with light oak finish; incubating chamber made of Russian iron and of such dimensions that it provides for an air jacket between incubating chamber and walls of cabinet of approximately 2 in.; thermo-regulator, controlling the temperature, is of capsule type and has means for adjustment so that incubator can be regulated for the proper temperature of 37½°C to conform with surrounding room temperature; furnished complete with stand and thermometer; can also be supplied with special gas burner, in place of oil heater, if desired, at same price.

No.	A	B	C
Height, inside, cm	67½	52½	29
Width, inside, cm	42½	37½	25
Depth, inside, cm	37½	37½	25
Each	140.00	125.00	70.00

CULTURE MEDIA

Our Media is tested for sterility before shipment. You will find Media to be carefully titrated and of absolute reliability.



13730

13730 **Incubator and Drying Ovens—DeKhotinsky's.** Designed by A. DeKhotinsky, of the University of Chicago, electrically heated and regulated; made with double walls of asbestos wood, filled with magnesia-asbestos and having door of same construction; to prevent loss of heat by conduction, metal framing is dispensed with; has perforated shelves of asbestos wood, chosen for its resistance to laboratory fumes and chemicals; four heating units are placed between the two bottoms of the cabinet, with an opening over them in the inner bottom, covered by a deflecting plate; only one unit is connected with the relay, which serves to regulate the temperature within a range of 5° to 70°C above that of the room; for a temperature of 70° to 120°C a second unit is introduced by means of the switch; heating units are inserted from outside cabinet, and a unit can be instantly replaced without opening door or interrupting operation; regulator is based on the principle of expanding mercury in a steel tube, since steel and mercury have many times the thermal conductivity of glass and liquids often used in this connection; regulating head, which may be set for temperatures between 20° and 150°C, and higher if required, carries platinum point; regulating head and steel tube are connected by glass capillary tube, through which platinum point makes contact with the mercury, the glass tube projecting through top of incubator so that this action may be observed; apparatus is finished on outside in white enamel, baked and polished, and is mounted on a nickel-plated steel base; furnished with two cartridge fuses and connecting cord with Hubbell plugs; with single door.

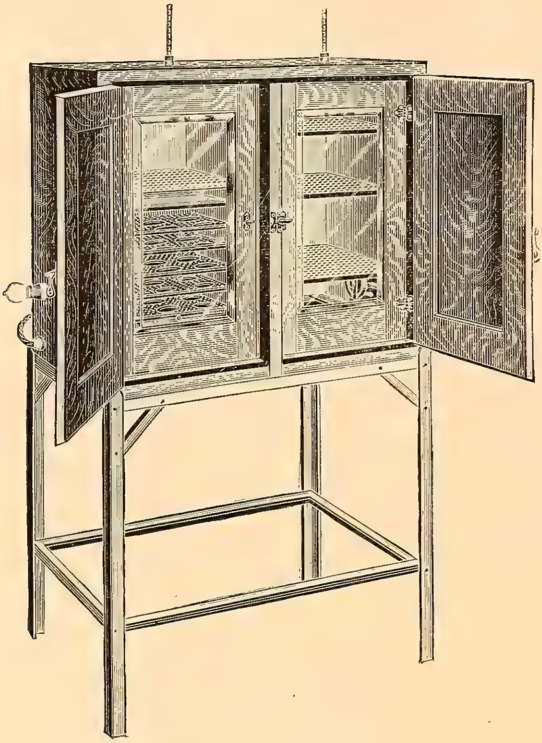
No.	A	B	C
Height, inside, cm	48	36	25
Width, inside, cm	41	28	18
Depth, inside, cm	36	31	17
Each	145.00	90.00	55.00

For 220-volt, D. C., or 110-volt, A. C., add $2.50 to above prices; for 220-volt, A. C., add $5.00.

13735 **Incubator and Drying Ovens—DeKhotinsky's.** Same as No. 13730 above, but with inner glass door.

No.	A	B	C
Height, inside, cm	48	36	25
Width, inside, cm	41	28	18
Depth, inside, cm	36	31	17
Each	160.00	105.00	70.00

For 220-volt, D. C., or 110-volt, A. C., add $2.50 to above prices; for 220-volt, A. C., add $5.00.

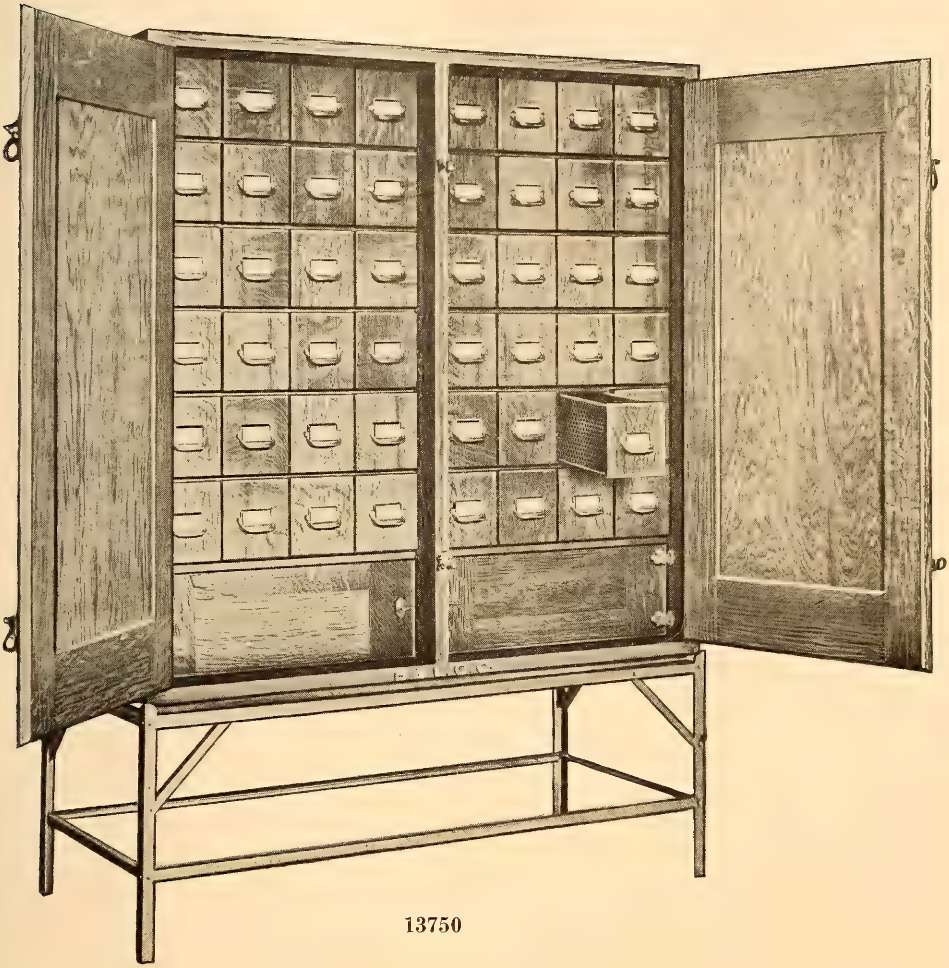


13745

13745 **Incubator and Paraffin Oven, Combined—Electric.** Consists of two chambers—one for incubation at 37½°C and the other for paraffin work at approximately 56°C, of equal size and each of the following dimensions: height, 75 cm; width, 43½cm; depth, 45 cm; each chamber is supplied with its own heating unit, pilot lamp and electro-thermostat, thus permitting the use of either chamber irrespective of the other; paraffin oven contains paraffin receptacle and one shelf, while incubator has three shelves; angle iron stand, 80 cm high, is furnished with apparatus; maximum current consumption, 2½ ampéres -- Each 300.00

For Paraffin Ovens of other types see pages 357 to 360.

Paraffin Receptacles for above on page 296.



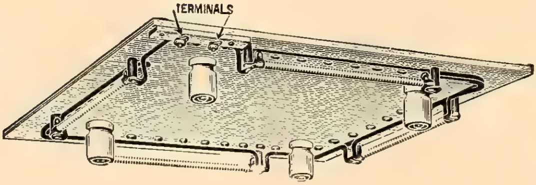
13750

13750 **Incubators—Compartment.** No. A is adapted for student use; has 48 drawer compartments enclosed by two outside doors, each compartment measuring 15 cm high x 13 cm wide x 46 cm deep; heated by five 32 c. p. lamps with steel chimneys and electric thermostat; furnished complete with 66 cm angle iron stand and Centigrade thermometer; Nos. B and C are similar to No. A, except for number of drawers and height of stand, which is 50 cm, while that of No. D is 65 cm.

No.	A	B	C	D
Height, outside, cm	140	122	104	104
Width, outside, cm	139	107	107	55
Depth, outside, cm	59	59	59	59
No. of compartments	48	36	24	12
Each	625.00	525.00	375.00	275.00

COLLEGE LABORATORY EQUIPMENT

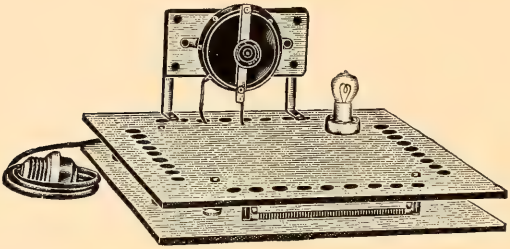
The installation of multiple apparatus of any kind will receive our most careful attention.



13755

13755 **Incubator Heating Elements—Electric.** Designed for use with incubators.

	No. A	B	C
Height, mm	35	35	35
Width, mm	375	245	215
Depth, mm	375	240	165
Each	**10.00**	**7.50**	**5.50**

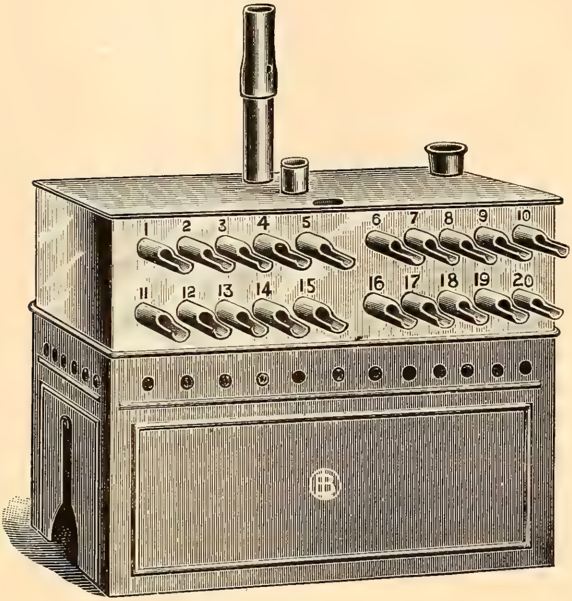


13760

13760 **Incubator Heating Elements—Electric.** Designed for electrifying gas-heated incubators, etc., automatically maintaining a constant temperature of 37½°C; constructed to operate on any specified voltage, alternating or direct current; provided with thermostat.

	No. A	B	C
Height, cm	19	19	19
Width, cm	37½	24½	21½
Depth, cm	37½	24	16½
Suitable for incubating space not to exceed, cu. in.	10,800	2,000	1,000
Each	**30.00**	**25.00**	**20.00**

For Thermostats and Temperature Regulation Equipment See "Regulators"



13765

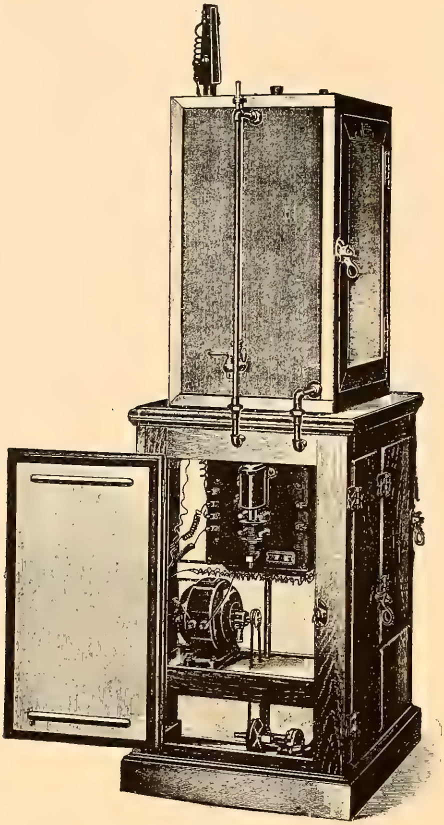
13765 Incubators—Opsonic. Form usually employed, having proved very reliable in research work, where serum containing the washed leucocytes and the organisms under investigation must be kept at 37°C for some time; made of heavy polished copper and constructed with tubulations for a thermometer, a thermo-regulator and for filling the bath; cup, 25 x 89 mm, is provided for holding instruments, and there are receptacles for 20 pipettes; provided with sheet-iron base, 20 cm high; No. A has six tubes on top for test tubes, each 22 mm in diameter, but No. B has no such tubes; for gas, but without equipment.

No.	A	B
Height, outside, cm	35	35
Width, outside, cm	20	20
Depth, outside, cm	15	10
Each	30.00	24.75

13770 Incubators—Opsonic. Same as No. 13765 above, but with gas equipment consisting of one Koch's safety burner, small size Reichert's thermo-regulator, incubator thermometer, graduated 0° to 50°C and 6 ft. of metallic tubing.

No.	A	B
Height, outside, cm	35	35
Width, outside, cm	20	20
Depth, outside, cm	15	10
Each	43.50	38.25

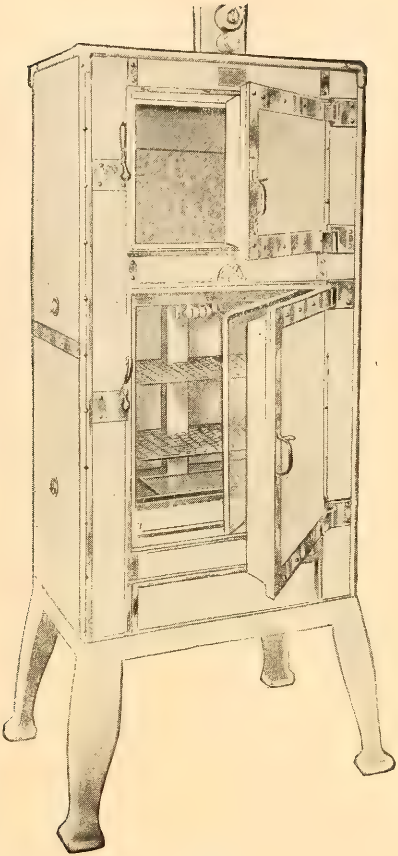
Wasserman Equipment
See Index



13780

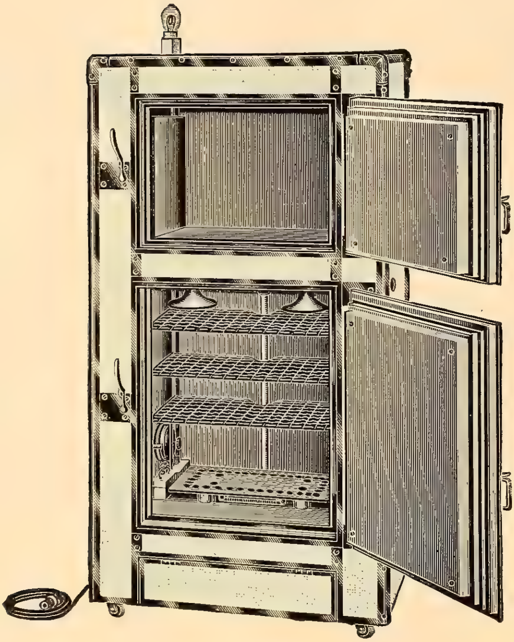
13780 **Incubators—Low Temperature, Giddings'.** Made to accord with recommendations of Professor N. J. Giddings, of the West Virginia Experiment Station, Morgantown; incubator proper is standard, water-jacketed type, with outer air space and covered with heat insulating material; beneath incubator is ice chest fitted with coils of pipe, which are connected with water jacket of incubator so that water may circulate freely; in pipe line is pump, operated by electric motor which is controlled by thermostatic bar, making and breaking the circuit through a solenoid switch, energized by the line, thus rendering operator independent of the troublesome dry battery; regulation is effected as easily and quickly as with ordinary electric incubator, temperature for which thermostat is adjusted remaining constant within ½°; all parts readily accessible and construction very simple; to put equipment into operation it is only necessary to connect feed wires and turn on current; cooling arrangement permits practically any desired temperature below that of room to be maintained; if temperature below freezing point is desired, cracked ice and sodium thiosulphate (hypo) are placed in ice chest, while from 4 to 12 liters of water are drawn off and replaced by solution consisting of 50% of glycerine and 50% of alcohol (95%); by this method it is practicable to use apparatus with temperatures down to —5°C; incubator is of solid and compact appearance.

No.	**A**	**B**	**C**	**D**	**E**	**F**
Height, inside, cm	45	70	48	48	48	24
Width, inside, cm	75	45	45	45	30	30
Depth, inside, cm	35	35	35	24	24	24
Each	**405.00**	**380.00**	**330.00**	**300.00**	**275.00**	**237.50**

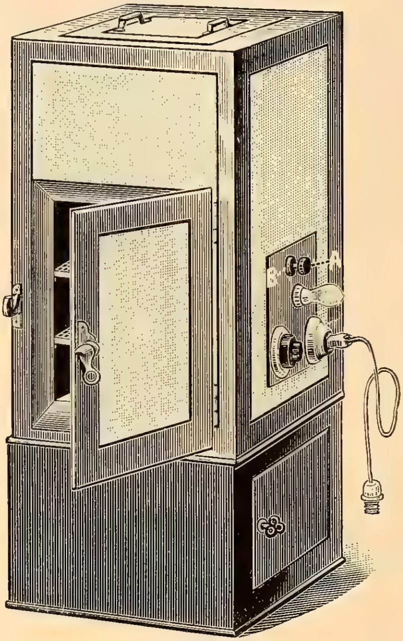


13785

13785 Incubator—Low Temperature, Thelco. Constant temperature is maintained by circulation of cool air around narrow water jacket of incubator chamber; cool air is admitted from ice chamber through shutter operated by milled head screw on outside, shutter being adjusted to maintain a cool air temperature slightly below that required and electric heating plate under water jacket bringing chamber to right temperature; heating plate is controlled by Thelco spiral bimetallic regulator constant to 1° C; this method maintains uniform temperature throughout chamber and is very economical of ice, a single supply lasting several days in ordinary weather; heating plate is a wire-wound resistance, readily removable; a switch, for turning current on and off, and a pilot lamp are mounted on top of apparatus; incubator chamber is double-walled, of heavy copper and provided with three perforated shelves, which may be placed at any desired height; has felt-cushioned, air-tight glass door; cabinet is of wood, insulated with felt and dead air spaces, making 10 walls in all; entirely sheathed in steel plate, handsomely finished in white porcelain with polished aluminum trimmings; incubator is mounted on heavy iron base; although designed primarily for gelatine culture cultivations at 20°C, it can be used just as satisfactorily at any predetermined temperature from about 10°C to 40°C, or at temperatures below 10°C by using a suitable cooling mixture; chamber dimensions: height, 46 cm; width, 38 cm; depth, 31 cm--------Each 340.00



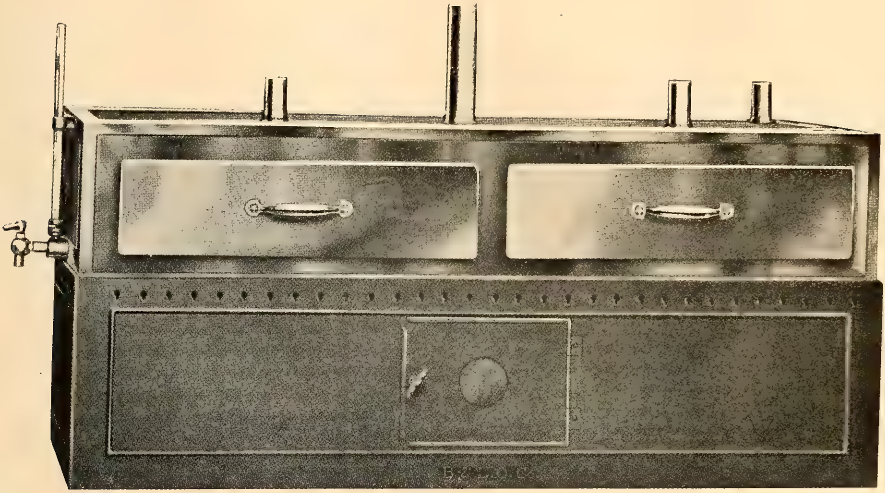
13790



13795

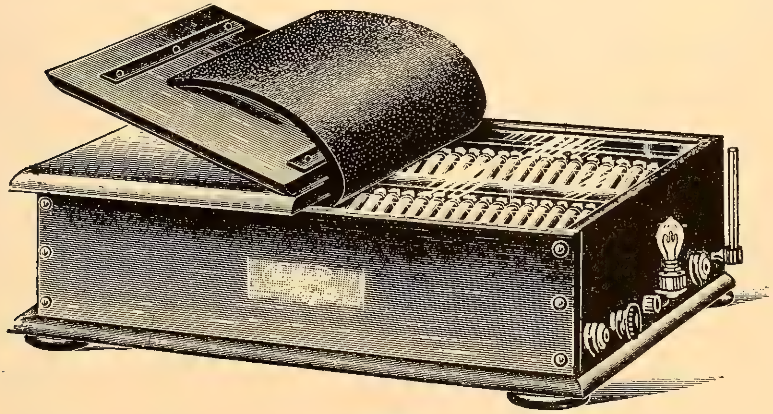
13790 Incubator—Low Temperature. Cabinet made in glazed porcelain finish, both inside and outside, with aluminum trimmings; walls are thoroughly insulated, reducing ice consumption to a minimum; rests on four casters and can be readily moved about; is intended to be used for a constant temperature of 20°C, but has a range of from 10°C to 30°C and can, if desired, be adjusted to any temperatures within these limits by changing adjustment of thermostat; is electrically heated by standard heating plate and automatically controlled by thermostat; a pilot lamp indicates whether current is on or off; maximum current consumption, one ampére; furnished with three removable shelves and Centigrade thermometer; inside dimensions of incubating chamber: height, 60 cm; width, 50 cm; depth, 30 cm; inside dimensions of ice compartment: height, 42½ cm; width, 30 cm; depth, 30 cm, which is large enough to accommodate approximately 90 lbs. of ice____________________________Each **275.00**

13795 Incubator—Low Temperature. Constructed entirely of copper and asbestos board and perfectly insulated; no running water is required; construction insures a natural and perfect circulation of air and an even temperature throughout incubating chamber; will automatically remain constant at 20°C, or any other predetermined temperature and uses a minimum amount of ice and electric current; operates on 110-volt, direct or alternating current and can be supplied for 220-volt circuit at price quoted on request; mounted on base, 31 cm high; inside dimensions: height, 36 cm; width, 31 cm; depth, 31 cm ____Each **277.50**



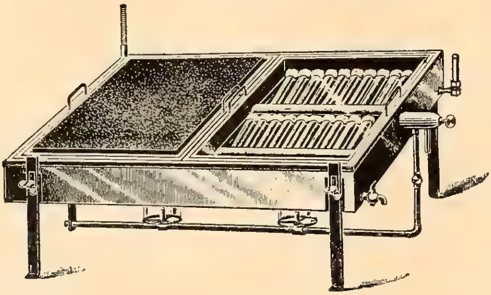
13800

13800 **Inspissator—Blood Serum, Pernot's.** Unusually well designed and constructed, designed by Dr. E. F. Pernot, city bacteriologist of Portland, Ore.; main features are the heavy heads of cast bronze and heavy copper water jacket to prevent sagging during heating; heats evenly, and tubes solidify at same time and to same degree; consists of heavy copper water jacket, containing two drawers with total capacity of 350 tubes, 120 x 14 mm; water jacket is 32 mm deep on all four sides; cast bronze heads are 17.5 cm high and expansion of water is permitted by brass tube, 15 cm high x 4 cm in diameter; apparatus has glass water gauge and an opening for filling; provided with two burners, enclosed by the sheet-iron base; outside dimensions: height, 35 cm; width, 76 cm; depth, 47 cm__Each 120.00



13805

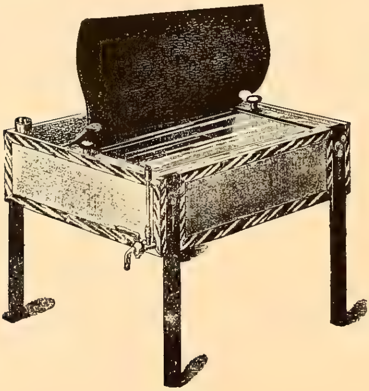
13805 **Inspissator—Blood Serum Solidifying Apparatus.** Made of copper in polished hardwood case, with heavy felt cover; electrically heated, voltage to be used should be specified; capacity, 40 tubes in 4 racks; inside dimensions: length, 57 cm; width, 27 cm; depth, 7½ cm__Each 110.00



13810

13810 Inspissator—Blood Serum Solidifying Apparatus. Made of copper, with glass top and heavy felt cover; gas regulator and burners included.

No.	A	B
Length, inside, cm	57	30
Width, inside, cm	27	27
Depth, inside, cm	7½	7½
Each	60.00	54.00



13815

13815 Inspissator—Blood Serum Solidifying Apparatus. Made of copper, double-walled, heavily tinned on inside and outside covered with insulating material; has glass top covered with heavy felt; two front legs are adjustable so that oven can be tilted, if desired; provided with water level and drip cock and has two openings for thermometer and gas regulator; for gas, without equipment.

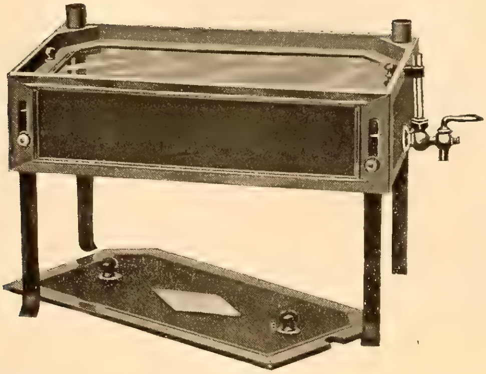
No.	A	B	C
Length, inside, cm	41	41	31
Width, inside, cm	36	20	25
Height, inside, cm	6½	6½	6½
Each	42.00	34.25	33.00

13820 Inspissator—Blood Serum Solidifying Apparatus. Same as No. 13815 above, but with gas equipment consisting of one Koch's safety burner, Reichert thermo-regulator, thermometer graduated to 150°C and 3 ft. of metallic tubing.

No.	A	B	C
Length, inside, cm	41	41	31
Width, inside, cm	36	20	25
Height, inside, cm	6½	6½	6½
Each	55.50	47.75	46.50

13825 Inspissator—Blood Serum Solidifying Apparatus. Same as No. 13815 above, but with electric equipment.

No.	A	B	C
Length, inside, cm	41	41	31
Width, inside, cm	36	20	25
Height, inside, cm	6½	6½	6½
Each	75.00	67.25	66.00



13830

13830 **Inspissator—Blood Serum Solidifying Apparatus.** Consists of double-walled case, made of copper, tin-lined and covered with insulating, water-proof material; cover, or top of apparatus, is in two parts, the one underneath being of plate glass; chamber is supported on four legs, two of which are adjustable so that tubes containing serum may be inclined to suit requirements; apparatus is also used for agar agar and similar nutrient substances; for gas, without equipment.

No.	A	B	C
Length, inside, cm	41	41	31
Width, inside, cm	36	20	25
Height, inside, cm	6½	6½	6½
Each	44.00	38.50	33.00

13835 **Inspissator—Blood Serum Solidifying Apparatus.** Same as No. 13830 above, but with gas equipment consisting of one Koch's safety burner, Reichert thermo-regulator, thermometer graduated to 150°C and 3 ft. metallic tubing.

No.	A	B	C
Length, inside, cm	41	41	31
Width, inside, cm	36	20	25
Height, inside, cm	6½	6½	6½
Each	57.50	51.50	46.50

13840 **Inspissator—Blood Serum Solidifying Apparatus.** Same as No. 13830 above, but with electric equipment.

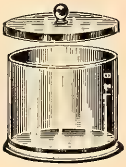
No.	A	B	C
Length, inside, cm	41	41	31
Width, inside, cm	36	20	25
Height, inside, cm	6½	6½	6½
Each	77.00	71.50	66.00

LOEFFLER'S BLOOD SERUM

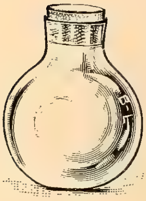
In the preparation of this media we suggest the use of a serum centrifuge as shown on page 112.

4335

4336



4337



4338

Jars—Anaerobic Culture—See page ——.

4335 **Jars—Cylindrical.** Of clear white glass; with flat bottom, ground rim and loosely fitting cover.

No.	A	B
Height, mm	130	180
Diameter, mm	65	80
Each	.35	.55

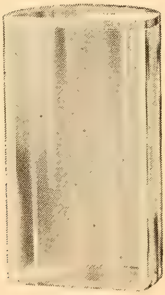
4336 **Jars—Cylindrical.** Of heavy, clear white glass; with loosely fitting cover and cut and polished knob; of fine quality.

No.	A	B	C	D	E
Height, mm	75	100	125	150	200
Diameter, mm	75	100	125	150	200
Each	1.40	1.90	2.20	3.20	4.00

4337 **Jars—Cylindrical.** Of heavy, clear white glass; with foot; polished rim and loosely fitting cover.

No.	A	B	C	D	E
Height, mm	100	120	150	210	260
Diameter, mm	100	120	150	210	260
Each	.70	.90	1.20	2.00	3.00

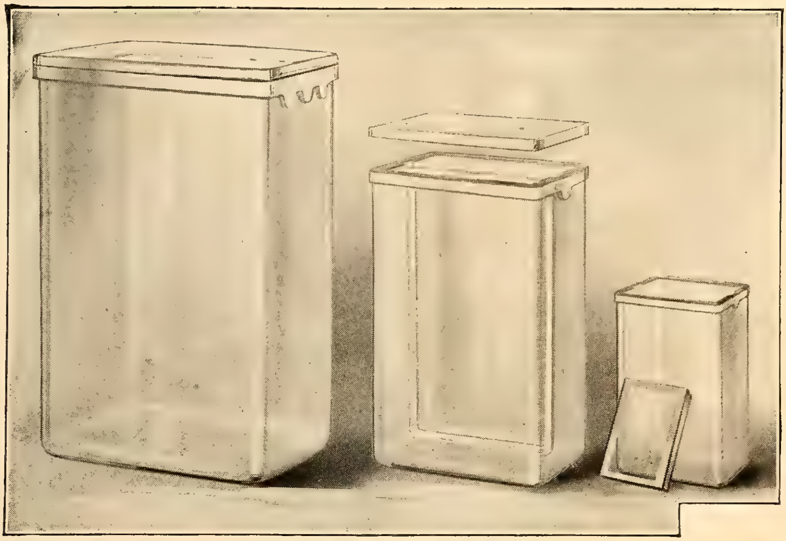
4338 **Jar—Embryo.** Blown from glass tubing, extra quality; with cork stopper; capacity, 15 cc____Each .15



13900

13900 **Jar—Albert's Museum.** In form of half-cylinder, making it economical in use of preserving fluid and of great value for those specimens in which it is desired to show both rounded surface and cut surface at same time, which cannot be done properly in round jar or one with parallel flat surfaces; is of great value for mounting specimens in Kaiserling's solution No. III, in which a piece of thymol has been placed as additional preservative; outside dimensions: height, 150 mm; width, 80 mm; radius of curved surface, 70 mm; top is plate of plain glass, which is to be cemented to jar; flat surface is ground and polished to minimize errors in observation ____ Each 1.25

13905 **Jar—Albert's Museum.** Same as No. 13900 above, but with flat surface of plain glass____Each .75



13885

13885 Jars—Museum, American Medical. Superior in every way to those previously imported; of clear, colorless glass, carefully annealed; with heavy base and corners, making jar very durable; sides are of uniform thickness, surfaces being perfect planes and highly polished, with corners and edges exactly even and uniform; upper edge is ground in such a manner that covers fit accurately and are easily and firmly sealed; covers are of clear glass, with a small opening in the center of each through which fluid contents of jar may be changed or additional fluid added after sealing jar; a special feature is the unique method of suspending specimen; a small groove in upper edge of each end permits specimen supports to be held firmly, with specimen suspended in vertical position, instead of tilting to back or front of jar, as in old method; six larger jars have three sets of grooves, so that specimens may be suspended from front and rear, if desired, as well as at center.

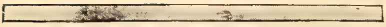
	No. A	B	C
Dimensions, mm	50 x 50 x 30	100 x 45 x 30	150 x 80 x 50
No. in orig. bbl.	240	180	48
Jars only, per dozen	**2.95**	**4.75**	**14.25**
Covers only, per dozen	**2.15**	**2.00**	**3.40**

	No. D	E	F
Dimensions, mm	150 x 150 x 90	160 x 100 x 80	200 x 80 x 45
No. in orig. bbl.	24	36	30
Jars only, per dozen	**18.30**	**16.70**	**18.00**
Covers only, per dozen	**4.50**	**4.00**	**3.40**

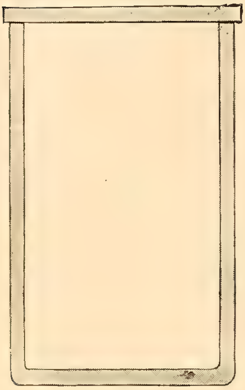
	No. G	H	I
Dimensions, mm	200 x 130 x 80	200 x 130 x 130	220 x 150 x 55
No. in orig. bbl.	18	18	18
Jars only, per dozen	**22.00**	**24.40**	**33.40**
Covers only, per doz.	**4.20**	**4.50**	**4.20**

	No. J	K
Dimensions, mm	250 x 220 x 100	250 x 250 x 120
No. in orig. bbl.	12	9
Jars only, each	**4.30**	**5.80**
Covers only, each	**.70**	**.95**

In original barrels with covers less 10% discount.



13890



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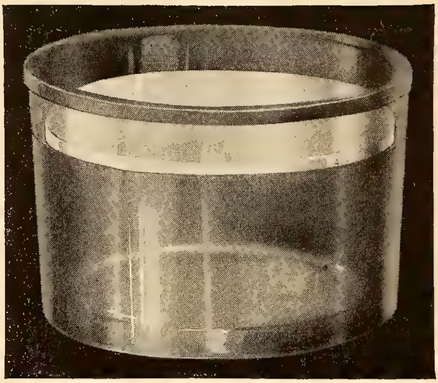


13908

13890 **Specimen Supports.** For above jars; designed for large firm specimens, where frame is not necessary; made of glass rod.

For jars, No.	A	B	C	D	E	F
Each	.10	.10	.10	.12	.10	.10
Per dozen	1.00	1.00	1.00	1.25	1.00	1.00

For jars, No.	G	H	I	J	K
Each	.12	.12	.12	.15	.15
Per dozen	1.25	1.25	1.25	1.50	1.50

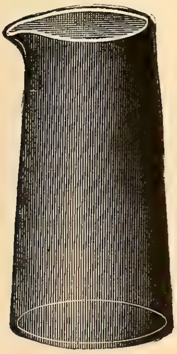
13895 **Specimen Frame Supports.** For above jars; designed for specimens which require stretching on frame or support, both at sides and top; made of glass rod.

For jars No.	A	B	C	D	E	F
Each	.25	.25	.25	.30	.30	.35
Per dozen	2.50	.250	2.50	3.00	3.00	3.60

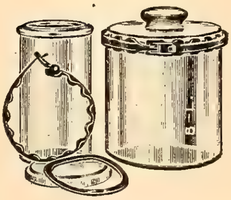
For jars No.	G	H	I	J	K
Each	.35	.35	.40	.40	.40
Per dozen	3.60	3.60	4.25	4.25	4.25

13908 **Jars—Museum.** For eye specimens; insures permanence of the preparation, neatness and permanence of label, ability to display the specimen to good advantage, and good appearance and convenience of handling; inner cover is made of white (milk) glass, which is the proper background for specimen; outer cover is transparent glass, beneath which the label is placed; space between is filled with sealing material; complete with cover________________________________Each 1.50

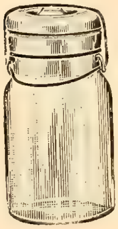
We shall be pleased to send literature on any particular apparatus. Our publications cover a wide field of scientific application.



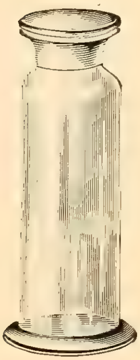
4345



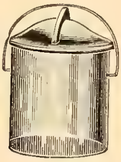
4355-60



4365



4350



4370

4345 Jars—Precipitating. With pour-out.

No.	A	B	C	D	E
Capacity, pints	¼	½	1	2	4
Each	.55	.60	.80	1.10	1.50

No.	F	G	H	I
Capacity, pints	8	12	16	24
Each	1.75	2.50	3.50	6.50

4350 Jars—Preparation. Of clear white glass; with foot, neck and ground-glass stopper.

No.	A	B	C	D	E
Height, mm	80	100	150	180	200
Diameter, mm	30	30	50	60	80
Each	.50	.60	.90	1.00	1.40

4355 Jars—Preservation. Improved form, having perfectly straight sides with no constriction at top; provided with glass cover, fitting absolutely air-tight by rubber band and hermetically held in place by metal band; an ideal jar for exhibition purposes.

No.	A	B
Capacity, cc	500	1000
Height, inside, mm	137	170
Diameter, inside, mm	63	82
Each	.18	.20

4360 Jars—Preservation. Similar to No. 4355 above, but having cover with knob.

No.	A	B	C
Capacity, cc	1350	1750	2500
Height, inside, mm	125	155	240
Diameter, inside, mm	115	115	115
Each	.30	.40	.60

4365 Jars—Preservation (Lightning). Of greenish glass; lid clamped air-tight by spring clip.

No.	A	B	C	D
Capacity, pints	1	1½	2	4
Each	.14	.15	.16	.20

4370 Jars—Preservation. Of clear white glass; mouth of jar same size as body; with glass cover, fitting air-tight by rubber band and held by spring clamp.

No.	A	B	C	D	E
Capacity, pints	1/16	1/2	2/3	1	1½
Each	.15	.20	.22	.25	.35

4375

4385

4390

4375 Jars—Preservation, Screw-Capped. Of clear, white glass; with metallic screw cover.

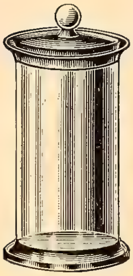
No.	A	B	C	D	E	F
Capacity, oz.	1	1½	2	4	8	16
Each	.08	.09	.10	.15	.20	.27

4385 Jars—"Safety Valve." Of white glass; rendered absolutely air-tight by improved spring clamp with rubber washer.

No.	A	B	C	D
Capacity, cc	125	250	500	1000
Per Dozen	1.10	1.60	1.90	2.20

4390 Jars—Specie. With lacquered, tin cover.

No.	A	B	C	D
Capacity	1 pt.	1 qt.	½ gal.	1 gal.
Each	.20	.30	.45	.80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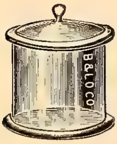
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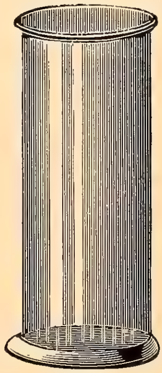

4410

4405 Jars—Specimen. Of clear, white glass, free from imperfections; with foot, lip and stopper-like cover ground in air-tight.

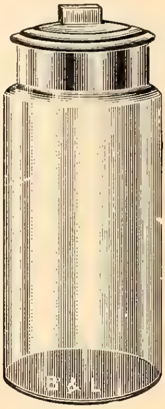
No.	A	B	C
Height, mm	120	120	180
Diameter, mm	30	50	120
Each	.40	.45	1.20

4410 Jars—Specimen. Of clear, white glass; with ground flange.

No.	A	B	C	D	E	F	G	H	I
Height, mm	80	100	120	120	130	150	150	180	230
Diameter, mm	25	40	30	50	75	100	150	120	180
Each	.12	.18	.20	.22	.42	.58	1.00	.80	1.65

4415 Jars—Specimen. Of heavy, clear, white glass; with carefully ground, air-tight cover.

No.	A	B	C	D	E
Height, mm	80	130	150	180	250
Diameter, mm	140	100	200	180	220
Each	.90	.85	2.75	2.25	4.00



4395

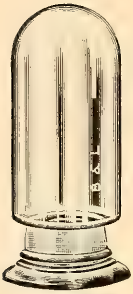
4395 **Jars—Specimen.** Of clear, white glass; with extra wide mouth and glass stopper carefully ground in.

No.	1	2	3	4	5
Capacity, oz.	1½	2½	3½	5	7
Height to shoulder, in.	2	3	2½	3¾	5
Height to top of stopper, in.	3½	4½	4¼	5½	6¾
Diameter of body, in.	1½	1½	2	2	2
Diameter of mouth, in.	1¼	1¼	1½	1½	1½
Each	.58	.60	.64	.68	.78
Per Doz.	**5.70**	**6.00**	**6.30**	**6.75**	**7.80**

No.	6	7	8	9	10
Capacity, pints	½	¾	1	¾	1¼
Height to shoulder, in.	3½	5	7	4	6
Height to top of stopper, in.	5½	7	9	6¼	8¼
Diameter of body, in.	2½	2½	2½	3	3
Diameter of mouth, in.	2	2	2	2½	2½
Each	.80	.90	1.00	1.05	1.20
Per Doz.	**8.00**	**9.00**	**10.00**	**10.50**	**12.00**

No.	11	12	13	14	15
Capacity, pints	1¾	2	2½	3½	2½
Height to shoulder, in.	8	6	8	10	5
Height to top of stopper, in.	10¼	8½	10½	12½	7¾
Diameter of body, in.	3	3¾	3¾	3¾	4½
Diameter of mouth, in.	2½	3	3	3	3½
Each	1.40	1.56	1.90	2.25	1.95
Per Doz.	**14.00**	**15.60**	**19.00**	**22.50**	**19.50**

No.	16	17	18	19
Capacity, pints	4	5¾	6¼	9
Height to shoulder, in.	8	12	7	10
Height to top of stopper, in.	10¾	14¾	10	13
Diameter of body, in.	4½	4½	6	6
Diameter of mouth, in.	3½	3½	5	5
Each	2.40	2.90	3.40	4.50
Per Doz.	**24.00**	**29.00**	**34.00**	**45.00**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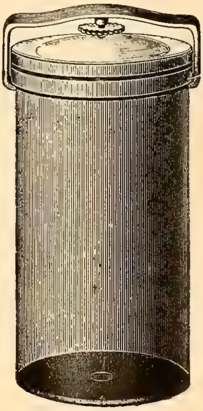
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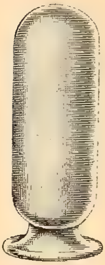

4425

4400 Jars—Specimen. With mouth same size as body; with rubber band; provided with metallic clamp and two glass suspension rings on under side of glass cover.

No.	1	2	3	4	5	6
Capacity, pints	½	¾	1	1½	2¼	1¾
Height, without lid, in.	4	6	8	12	18	6
Diameter of mouth, in.	2¼	2¼	2¼	2¼	2¼	3½
Each	**1.30**	**1.40**	**1.44**	**1.60**	**1.80**	**1.90**
Per Doz.	**13.00**	**14.00**	**14.40**	**16.00**	**18.00**	**19.00**

No.	7	8	9	10	11	12
Capacity, pints	2½	4	6	qts. 2¾	4	5
Height without lid, in.	8	12	18	8	12	15
Diameter of mouth, in.	3½	3½	3½	5	5	5
Each	**2.00**	**2.40**	**2.85**	**3.65**	**4.32**	**4.60**
Per Doz.	**20.25**	**24.00**	**28.50**	**36.50**	**43.20**	**46.00**

No.	13	14	15	17	18	20
Capacity, quarts	6	gal. 1	1½	1½	2¼	3½
Height without lid, in.	18	8	12	8	12	18
Diameter of mouth, in.	5	6¼	6¼	7⅝	7⅝	7⅝
Each	**5.00**	**4.68**	**5.20**	**7.20**	**8.20**	**9.60**
Per Doz.	**50.00**	**46.80**	**52.00**	**72.00**	**82.00**	**96.00**

No.	21	22	23	24	25
Capacity, gallons	4½	7	4¾	7¼	10
Height without lid, in.	24	36	12	18	24
Diameter of mouth, in.	7⅝	7⅝	11½	11½	11½
Each	**11.00**	**14.40**	**17.00**	**21.60**	**27.00**
Per Doz.	**111.00**	**144.00**	**171.00**	**216.00**	**270.00**

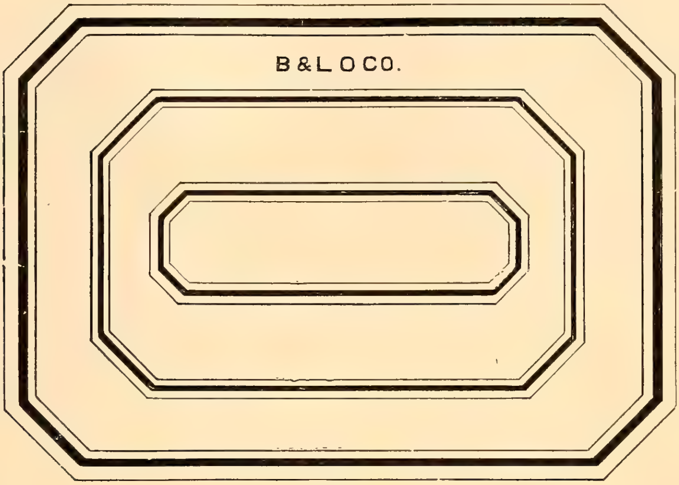
4420 Jars—Specimen. Inverted form; of clear, white glass; with carefully ground, air-tight stopper, serving as pedestal on which jar rests.

No.	A	B	C
Height,	130	190	320
Diameter, mm	50	80	120
Each	**.45**	**1.00**	**1.90**

4425 Jars—Specimen. Inverted form; for cork stopper.

No.	A	B	C	D	E
Capacity	2 oz.	4 oz.	8 oz.	16 oz.	1 qt.
Height, in.	3¾	4⅜	6	7¾	9
Diameter, in.	1½	2	2½	2¾	3⅝
Each	**.25**	**.27**	**.34**	**.44**	**.60**

No.	F	G	H	I
Capacity	½ gal.	1 gal.	2 gal.	3 gal.
Height, in.	11	14	16	19
Diameter, in	4¼	5¾	6¾	8
Each	**1.00**	**2.00**	**3.00**	**5.00**



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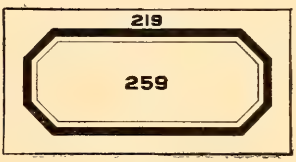


13920

13910 **Labels—Gummed.** Of superior quality; printed on white paper, with red border.

No.	A	B	C	D	E	F
Number	223	217	213	209	205	201
Length, mm	20	25	30	35	45	65
Width, mm	15	20	25	28	35	40
Per 12 boxes	1.00	1.00	1.00	1.00	1.00	1.00
Per box	.10	.10	.10	.10	.10	.10

No.	G	H	I	J	K	L
Number	259	261	219	241	239	229
Length, mm	33	50	40	22	30	42
Width, mm	15	15	20	15	18	30
Per 12 boxes	1.00	1.00	1.00	1.00	1.00	1.00
Per box	.10	.10	.10	.10	.10	.10

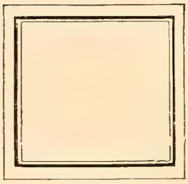
13915 **Labels—Gummed; in Books.** With red border and rounded corners; in sheets, perforated, bound in book form; size of sheet, 210 x 120 mm.

No.	A	B	C	D	E
Number	225	223	221	219	217
Labels per book	1575	1400	1050	750	750
Per book	.35	.35	.35	.35	.35

No.	F	G	H	I
Number	213	209	205	201
Labels per book	750	500	300	225
Per book	.35	.35	.35	.35

13920 **Labels—Gummed.** Of white paper with red border; in boxes containing 100 labels.

No.	A	B	C	D	E	F	G
Length, mm	70	73	100	100	105	105	120
Width, mm	25	40	28	40	40	50	52
Per box	.25	.25	.30	.30	.35	.35	.45



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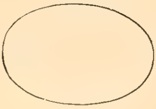

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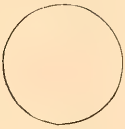

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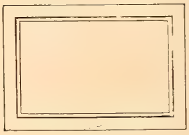


13930

13925 **Labels—Microscopical.** Square; size, 22 mm---------Per box of 100 .10
Per doz. boxes of 100 1.00

13930 **Labels—Microscopical.** Rectangular; size, 22 x 15 mm--Per box of 100 .10
Per doz. boxes of 100 1.00

13935 **Labels—Microscopical.** Oval; size, 20 x 14 mm-------Per box of 100 .10
Per doz. boxes of 100 1.00

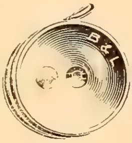
13940 **Labels—Microscopical.** Circular; diameter, 16 mm----Per box of 100 .10
Per doz. boxes of 100 1.00

13945 **Labels—Microscopical.** Square; size, 22 mm; bound in books of 500 labels each; printed on best white, gummed paper and scored so as to be readily torn from book, leaving clean edges; interleaved with paraffin paper; much more convenient than cut labels-----Per book .50

13950 **Labels—Microscopical.** Same as No. 13945 above, but rectangular; size, 22 x 15 mm ---------------------------------------Per book .50

13955 **Label Book.** Contains names and formulae of most used chemicals and reagents; printed on good paper, gummed and perforated and bound in book form -------------------------------------Per book .40

13965



13970

13960 **Measure—Meter-stick.** With graduations in metric system on one side and in inches on the other; fitted with metal bound ends---Each .50

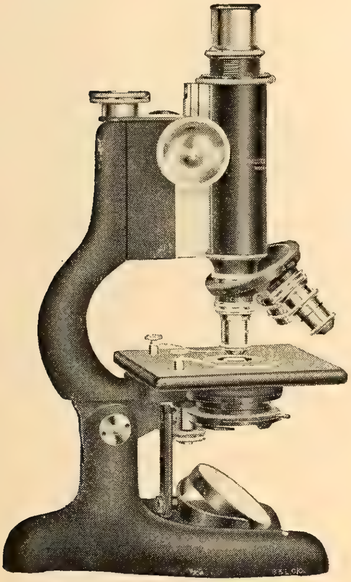
13965 **Measures—Tape.** Of linen, in heavy nickel-plated case with spring; graduated on one side in ⅛ in. and on other in mm and cm.

No.	A	B
Length, meters	1	2
Each	.70	1.10

13970 **Measures—Tape.** Of steel, in heavy nickel-plated case with spring; graduated on one side in 1/16 in. and on other in mm and cm.

No.	A	B	C
Length, meters	1	2	5
Each	1.00	1.50	4.50

Microscopes and Accessories



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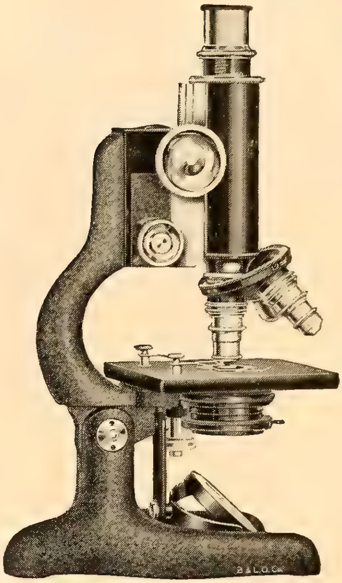


13985

13980 **Microscope FF—Bausch & Lomb.** Base is of modified horse-shoe form; body tube has outside diameter of 35 mm, provided with society screw threads; draw tube is graduated in single millimeters with every tenth line numbered; coarse adjustment is by standard rack and pinion, provided with stop to prevent pinion from overriding rack; fine adjustment is of lever type with milled head, ceasing to act when objective touches slide; stage measures 102 x 102 mm and is completely covered with vulcanized rubber except at point of attachment; substage is adjustable for focus by quick acting screw and has condenser provided with iris diaphragm beneath; body tube, arm, pillar and base are finished in alcohol-proof black, and pinion and fine adjustment heads in yellow; furnished in hardwood case, with optical equipment listed below.

Objectives

Objectives			Eyepieces	Nosepiece
Dry		Oil Immersion		
16 mm	4 mm	1.9 mm	5x 10x	Circular Triple
		Abbe Condenser		
		1.20 N.A.		

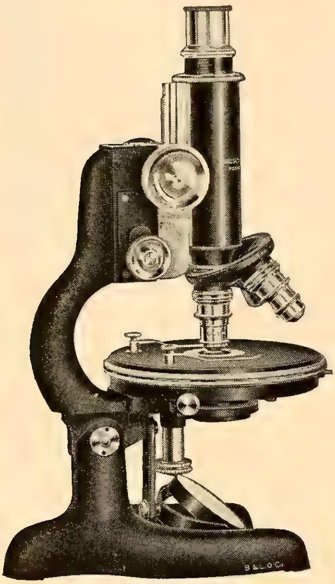
Price 128.50

13985 **Microscope FFS—Bausch & Lomb.** Base is of modified horse-shoe form; body tube has outside diameter of 35 mm and is provided with society screw threads; draw tube is graduated in single millimeters with every tenth line numbered; coarse adjustment is by standard rack and pinion, provided with stop to prevent pinion from overriding rack; side fine adjustment is of lever type, with micrometer head on each side of arm; complete rotation of micrometer heads produces vertical movement of 0.25 mm, always in same direction as coarse adjustment heads; stage is completely covered with metal except at point of attachment, and measures 102 x 102 mm; substage is adjustable for focus by quick acting screw, and has tube for condenser which comes into plane of stage when screw is turned up as far as possible, allowing condenser, which has iris diaphragm beneath, to be used in immersion contact with slide; body tube arm, pillar and base are finished in alcohol-proof black, and pinion and fine adjustment heads in yellow; furnished with hard wood case and optical equipment listed below.

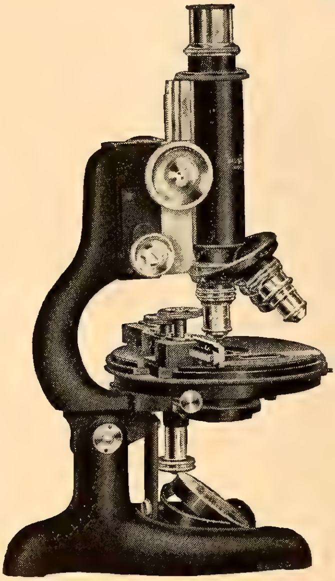
Objectives

Objectives			Eyepieces	Nosepiece
Dry		Oil Immersion		
16 mm	4 mm	1.9 mm	5x 10x	Circular Triple
		Abbe Condenser		
		1.20 N.A.		

Price 132.00



13990



14000

13990 **Microscope FCS—Bausch & Lomb.** Base is modified horse-shoe form; body tube, provided with society screw threads, has outside diameter of 35 mm; draw tube, graduated in single millimeters, is adjustable in lined sleeve or in metal fitting, if so specified, and is provided with society screw thread for use of Abbe apertometer objective, etc.; coarse adjustment is by standard rack and pinion with stop to prevent pinion from overriding rack; side fine adjustment of lever type with micrometer head on each side of arm; complete rotation of micrometer heads produces vertical movement of 0.25 mm, always in the same direction as coarse adjustment heads; stage, of circular revolving type, 125 mm diameter, with distance of 76 mm from center to base of arm, is of metal with vulcanite top and provided with centering screws and spring clips; substage is furnished with swing-out condenser, which may be swung down so as to facilitate the use of illumination by mirror alone, injury to the diaphragm being prevented by a locking device; body tube, arm, pillar and base finished in alcohol-proof black, while pinion and fine adjustment heads are in yellow; furnished in hard wood case, with optical equipment indicated below.

Objectives			Eyepieces		Nosepiece
Dry		Oil Immersion			
16 mm	4 mm	1.9 mm	5x	10x	Circular Triple

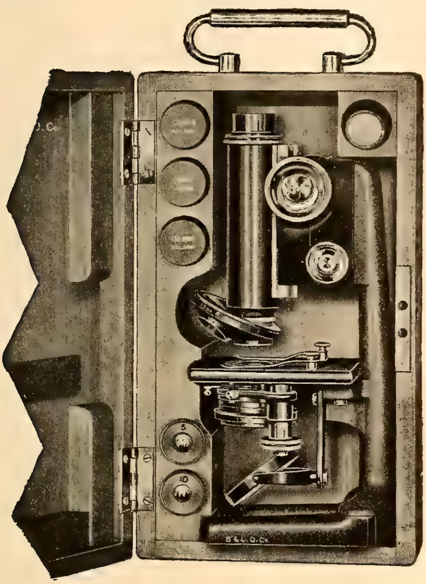
Abbe Condenser
1.20 N.A.

Price 153.50

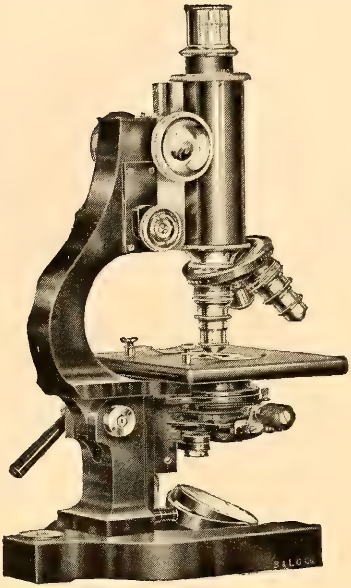
13995 **Microscope FCS—Bausch & Lomb.** Same as No. 13990 above, except that Oil Immersion Objective is 1.9 mm of 1.32 N.A., a new construction in which, by use of fluorite, a considerable reduction of secondary spectrum and with this a greater refinement in definition has been achieved Each 189.50

14000 **Microscope FDS—Bausch & Lomb.** Similar to No. 13990, except that stage, which is combined mechanically and plain, has special construction; revolving stage 125 mm diameter, with distance of 76 mm from center to base of arm; provided with two rack and pinion movements covering range of 75 mm and 33 mm respectively; pinion heads close together in fixed relative position at all times; stage construction allows easy removal of mechanical stage only, and groove left open is filled with a tightly fitting piece converting stage to a plain surface for using the stage clips Each 189.50

14005 **Microscope FDS—Bausch & Lomb.** Same as No. 14000 above, except that Oil Immersion Objective is 1.9 mm of 1.32 N.A., a new construction in which, by use of fluorite, a considerable reduction of secondary spectrum and with this a greater refinement in definition has been achieved Each 225.50



14010



14015

14010 **Microscope APS—Bausch & Lomb.** A portable model, with all of the recent improvements; base is folding, with each arm turning on its own center; fine adjustment heads are on the sides of the arm; complete rotation of the micrometer heads gives a vertical movement of 0.25 mm, always in the same direction as the coarse adjustment heads; fine adjustment ceases to act when objective touches the slide; stage is of metal, completely covered by vulcanized rubber except at the point of attachment; substage is adjustable by a quick-acting screw; case is of hard wood with polished finish, 10¾ x 6⅜ x 3¾ in., weight in carrying case is 8 lbs. 7½ oz.; furnished with optical equipment listed below.

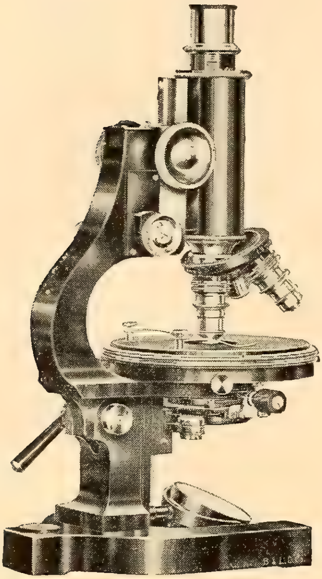
Objectives			Eyepieces		Nosepiece
Dry		Oil Immersion			
16 mm	4 mm	1.9 mm	5x	10x	Circular Triple
		Abbe Condenser			
		1.20 N.A.			

Price **138.00**

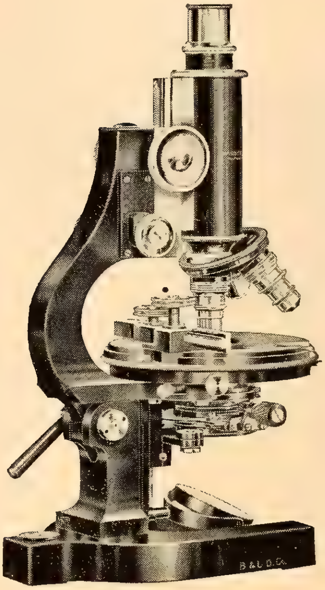
14015 **Microscope CAS—Bausch & Lomb.** One of the large size models; base is of the standard horseshoe form; body tube is larger than in the ordinary microscopes, 39 mm; fine adjustment heads, graduated to read 2.5 microns of vertical movement, are on the side of the arm and cease to operate when objective touches the slide; one complete rotation of micrometer heads produces vertical movement of 0.125 mm, always in the same direction as the coarse adjustment heads; stage is unusually large, 116 x 108 mm, with a distance of 87 mm from center to arm at stage surface, provided with spring clips; substage furnished with swing-out condenser, which may be swung down so as to facilitate the use of illumination by mirror alone, injury to the diaphragm being prevented by a locking device; lower parts, arm and body tube finished in alcohol-proof black, other parts in yellow; furnished in hard wood case, with optical equipment indicated below.

Objectives			Eyepieces		Nosepiece
Dry		Oil Immersion			
16 mm	4 mm	1.9 mm	5x	10x	Circular Triple
		Abbe Condenser			
		1.20 N.A.			

Price **192.00**



14020



14030

14020 **Microscope CCS—Bausch & Lomb.** Base is extra large, of horseshoe form; body tube has outside diameter of 39 mm and is provided with society screw thread; draw tube is graduated in single millimeters, and is adjustable in lined sleeve, or in metal fitting, if so specified; coarse adjustment is by standard rack and pinion; side fine adjustment is of lever type with micrometer head on each side of arm, one with drum graduated to read 2.5 microns of vertical movement; complete rotation of micrometer heads produces vertical movement of 0.125 mm, always in same direction as coarse adjustment heads; stage, of metal with vulcanite top, is circular revolving type, 125 mm diameter; substage furnished complete with swing-out condenser and centering device for photomicrography; body tube, arm, pillar and base finished in alcohol-proof black, other parts in yellow; furnished in hard wood case with optical equipment listed below.

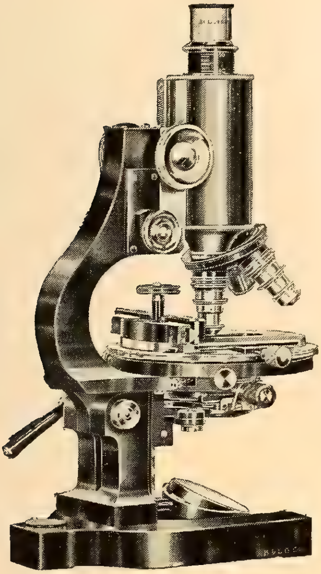
Objectives			Eyepieces	Nosepiece
Dry		Oil Immersion		
16 mm	4 mm	1.9 mm	5x 10x	Circular Triple
		Abbe Condenser		
		1.20 N.A.		

Price 220.00

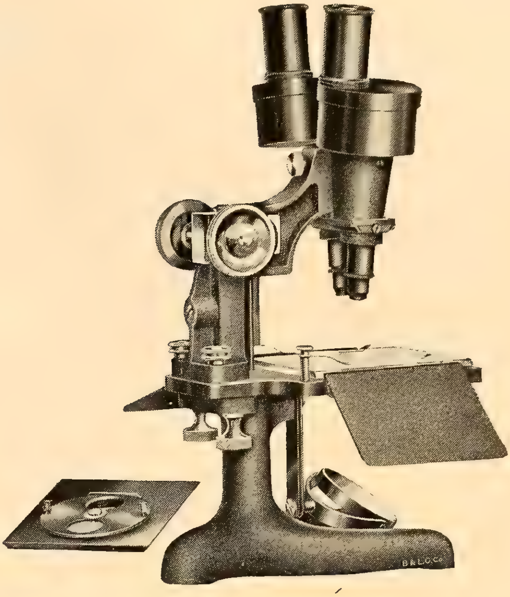
14025 **Microscope CCS—Bausch & Lomb.** Same as No. 14020 above, but with Oil Immersion Objective 1.9 mm of 1.32 N.A., which is a new construction in which, by use of fluorite, a considerable reduction of secondary spectrum and with this a greater refinement in definition has been achieved -- Each 246.00

14030 **Microscope CDS—Bausch & Lomb.** Similar to No. 14020 but with special stage; this stage is large mechanical type, with centering screws; is removable, with clamping device to prevent rotation when desired, 125 mm diameter, provided with two rack and pinion movements which permit the examination of slides 75 x 50 mm; upper part of stage may be removed, leaving a large flat surface with one rack movement; entire mechanical stage is removable for substitution of plain revolving stage ---------------------------------- Each 252.00

14035 **Microscope CDS—Bausch & Lomb.** Same as No. 14030 above, except that Oil Immersion Objective is 1.9 mm of 1.32 N.A., a new construction in which, by use of fluorite, a considerable reduction of secondard spectrum and with this a greater refinement in definition has been achieved -- Each 288.00



14040



14065

14040 Microscope DDS—Bausch & Lomb. This microscope has the same optical equipment and construction as No. 14020 above, except that its body tube is extra large, having a diameter of 50 mm, with a collar removable for attaching Micro-Tessar, 72 mm objective Each 270.00

14045 Microscope DDS—Bausch & Lomb. Same as No. 14040 above, except that Oil Immersion Objective is 1.9 mm of 1.32 N.A., a new construction in which, by use of fluorite, a considerable reduction of secondary spectrum and with this a greater refinement in definition has been achieved Each 306.00

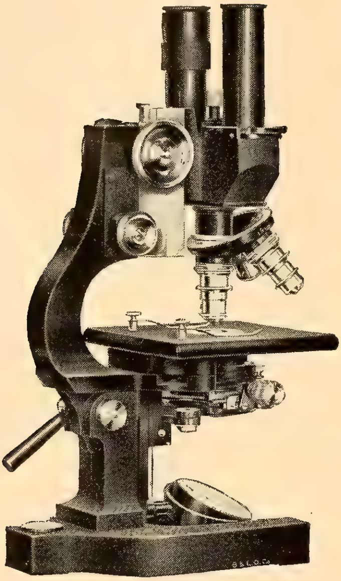
14050 Microscope DDS—Bausch & Lomb. Same as No. 14040, but without oil immersion objective and with apochromatic objectives, dry series, and compensating eyepieces; cir. double nosepiece and 1.40 N. A. Abbe condenser Each 319.50

14055 Microscope DDS—Bausch & Lomb. Same as No. 14050 above, but with 2 mm, 1.30 N.A. apochromatic objective, oil immersion series, and cir. triple nosepiece Each 454.00

14060 Stage—Bausch & Lomb. Plain, vulcanite covering; for Microscope DDS Each 21.00

14065 Microscope KA—Binocular, Bausch & Lomb. Base is of horseshoe form; arm provides for extraordinary range of working distance up to 155 mm, and also can be removed; body tubes are combination of two microscope tubes, causing one image to merge with the other, which makes the object appear stereoscopically, erect and not transposed; focusing adjustment is by standard rack and pinion, with location of rack and slide such that it is not immersed when working with water immersion objectives; stage is of metal provided with large rectangular aperture provided with two removable plates, one of glass, the other metal; pinion heads, set screws and stage clips are nickel-plated; other parts are in black crystal finish, alcohol-proof; furnished in hard wood case, with optical equipment indicated below.

No.	A	B		C		
Paired Objectives	40 mm	48 mm	32 mm	55 mm	40 mm	24 mm
Paired Eyepieces	10x	6.4x	10x	5x	7.5x	10x
Each	108.00	133.00		158.00		



14070

14070 **Microscope CAE—Binocular, Bausch & Lomb.** This, a newer model, is a binocular microscope of parallel tube type, using regular optics of all powers, including oil immersion objectives; base is extra large, horseshoe form; body tube has special prism system fitted with two parallel eyepiece tubes, separation of which is varied by a milled head placed between them and the interpillary distance indicated on a millimeter scale; prism case has society screw thread to take any microscope objective; fine focusing heads, graduated to read 2.5 microns of vertical movement, are on the side of arm and cease to operate when objective touches slide; one complete rotation of micrometer heads produces vertical movement of 0.125 mm, always in same direction as coarse adjustment heads; stage, measuring 116 x 108 mm, is of metal, completely covered with vulcanized rubber except at a point of attachment; substage is furnished with swing-out condenser, which may be swung down so as to facilitate the use of illumination by mirror alone, injury to the diaphragm being prevented by a locking device; body tube, arm, base and pillar are finished in alcohol-proof black, other parts in yellow; furnished in hard wood case, with optical equipment listed below.

Objectives Achromatic			Paired Eyepieces	Nosepiece
Dry		Oil Immersion	Huygenian	
16 mm	4 mm	1.9 mm	5x 10x	Circular Triple
		Abbe Condenser		
		1.20 N.A.		

Price 270.00

14075 **Microscope CAE—Binocular, Bausch & Lomb.** Same as No. 14070, except that Oil Immersion Objectives are 1.9 mm of 1.32 N.A., a new construction in which, by use of fluorite, a considerable reduction of secondard spectrum and with this a greater refinement in definition has been achieved .... Each 306.00

14080 **Microscope CAE—Binocular, Bausch & Lomb.** Same as 14070; but with paired eyepieces, compensating 7.5x and 12.5x; circular double nosepiece; Abbe Condenser 1.40 N.A., minus oil immersion objective .... Price 337.50

14085 **Microscope CAE—Binocular, Bausch & Lomb.** Same as 14070; but with 2 mm oil immersion objective; paired eyepieces, compensating 7.5x and 12.5x; circular triple nosepiece; Abbe Condenser 1.40 N. A. .... Price 472.00

14090 Achromatic Objectives—Bausch & Lomb. These objectives possess a high degree of excellence both mechanically and optically. The mountings are very accurately centered and the lenses fastened in a durable and permanent manner. All are computed from a 160 mm draw tube length and all dry objectives are corrected for a cover glass thickness of 0.18 mm the mean thickness of No. 2 cover glass. The influence of slight differences in the thickness of cover glasses may, of course be compensated for by variation of the tube length. In the a large flat and brilliant field. In the higher powers lower powers particular attention has been paid to securing a large flat and brilliant field. In the higher powers while the field is necessarily more restricted the corrections outside of the optical axis have been carried to a high order. The working distance has been kept as long as possible without sacrificing the perfection of the corrections.

The 4 mm objective is supplied in two types of different N.A. The .65 N.A. (E) having an unusually large working distance is very valuable for work with haemacytometers.

The 1.9 mm of 1.32 N.A. (V) is of new construction in which by the use of fluorite, a considerable reduction of the secondary spectra and with this a greater refinement of definition has been achieved.

No.	A	B	C	D	E	F	G	H	I
E. F., mm	48	32	16	8	4L	4S	3	1.9	1.9
N. A.	.08	.10	.25	.50	.65	.85	.85	1.3	1.32
Working Distance	.53	.38	7.0	1.6	0.6	0.3	0.2	.15	.13
Each	6.50	6.50	8.50	13.00	13.00	13.00	13.00	42.00	78.00

14095 Eyepieces—Huygenian, Bausch & Lomb. Marked according to their Magnification when used as magnifiers; have lower point situated somewhat higher than usual, thereby increasing the optical tube length and obtaining greater magnifications; are easily interchangeable, as whole series is parfocal, that is, lower focal planes of all lie at same distance below eye-lens; unless otherwise ordered, outside diameter measures 23 mm; 6.4x or 7.5x are recommended if but one eyepiece is to be purchased, 5x and 10x or 6.4x and 10x if two are to be purchased; higher powers can be furnished if desired.

No.	A	B	C	D	E
Magnifying Power	5×	6.4×	7.5×	10×	12.5×
Approx. E. F., in mm	50	40	33	25	20
Each	2.50	2.50	2.50	2.50	2.50

Table of Magnifications and Real Fields

Tube length = 160 mm. Projection distance = 250 mm.

Objectives		Eyepieces				
E. F. in millimeters	Initial Magnification	5×	6.4×	7.5×	10×	12.5×
43	2	10× 10.5 mm	13× 9.0 mm	15× 8.5 mm	20× 8.5 mm	25× 6.8 mm
32	4	20× 5.5 mm	26× 4.8 mm	30× 4.3 mm	40× 4.4 mm	50× 3.5 mm
16	10	50× 2.10 mm	64× 1.85 mm	75× 1.70 mm	100× 1.75 mm	125× 1.38 mm
8	20	100× 1.02 mm	130× 0.90 mm	150× 0.83 mm	200× 0.85 mm	260× 0.67 mm
4	43	215× 0.48 mm	275× 0.43 mm	320× 0.39 mm	430× 0.40 mm	560× 0.32 mm
3	57	285× 0.36 mm	365× 0.32 mm	420× 0.29 mm	570× 0.30 mm	740× 0.24 mm
1.9	95	475× 0.22 mm	610× 0.19 mm	720× 0.17 mm	950× 0.18 mm	1260× 0.14 mm

14100 **Objectives—Apochromatic, Bausch & Lomb.** Essential for the finest class of investigations; chromatic correction is accomplished for three, and spherical correction for two colors, which means that practically all of the images produced by the different colors of the spectrum lie in the same plane and are equally sharp; gives images that have just barely noticeable fine color fringes of tertiary nature, a great improvement over all other objectives; Nos. C and D are in adjustable mounting for correction to accord with thickness of cover glass used.

	Dry Series				Oil Immersion		
No.	A	B	C	D	E	F	G
F. F., in mm.	16	8	4	3	3	3	2
N. A.	0.30	0.65	0.95	0.95	1.30	1.40	1.30
Working Distance	4.7	0.7	0.2	0.15	0.20	0.15	0.15
Each	**35.00**	**44.00**	**60.00**	**71.00**	**132.00**	**176.00**	**132.00**

14105 **Eyepieces, Compensating, Bausch & Lomb.** For use with apochromatic objectives to prevent color fringes which would otherwise be caused by differently colored images of different sizes; work well with achromatic objectives whose focal length is 8 mm or less.

No.	A	B	C	D	E	F
Magnification	5×	7.5×	10×	12.5×	15×	25×
E. F., in mm	50	33.3	25	20	16.7	10
Each	**10.00**	**10.00**	**13.00**	**13.00**	**13.00**	**11.00**

141 **Lens Paper.** Of finest quality for cleaning lenses. In books of 50 sheets, 8½ x 12½ cm --Each .15

14107 **Lens Paper.** Same quality as No. 14016, but in packages of 100 sheets.

No.	A	B
Size, in.	18 x 12	9 x 12
Each	**$1.00**	**.60**

14108 **Immersion Oil Dropper.** An unusually clean and precise device for applying immersion oil to slides. A single drop of uniform size is delivered exactly where it is wanted by pressing top with thumb. Top portion removable for filling ----------------------------Each 2.75

Table of Magnifications

Tube length = 160 mm. Projection Distance = 250 mm.

By "initial magnification" is understood the magnification produced by the objective alone, i. e., the ratio of the size of the real image produced by the objective to the size of the object.

Apochromatic Objectives		Compensating Eyepieces					
E. F. in millimeters	Initial Magnification	5×	7.5×	10×	12.5×	15×	25×
16	10	50	75	100	125	150	250
8	20	100	150	200	250	300	500
4	40	200	300	400	500	600	1000
3	53	265	400	530	666	800	1330
2	80	400	600	800	1000	1200	2000

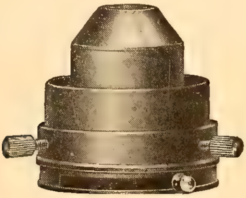
14110-15

14110 **Substage Condensers—Aplanatic, Bausch & Lomb.** Consists of three lenses—an over hemispherical, a meniscus and a double convex, which has a spheroidal surface for correcting the spherical abberation; lenses are separable, and condenser, with upper lens removed, gives numerical aperture of 0.60, and with both lenses removed, 0.40; furnished regularly with sleeve to fit substage ring of complete substage from below; iris diaphragm will be supplied at additional cost; numerical aperture, 1.20; E. F., 12 mm; slide thickness, 2.00 mm Each 36.00

14111 **Iris Diaphragm** for condenser above Each 6.50

14115 **Substage Condensers—Abbé, Bausch & Lomb.** Send light through the object under an angle sufficiently large to fill aperture of objective with light; condenser mounts fit into substage from below and are provided with iris diaphragm and swing-out carrier for holding a blue glass disc or a dark ground stop.

Numerical Aperture	1.20	1.40
E. F., in mm	12.0	8.7
Slide Thickness	1.80	0.90
Each	**12.00**	**14.50**



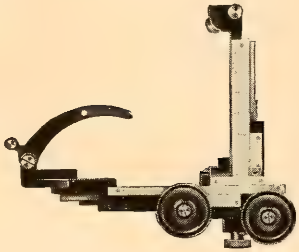
14120

14120 **Dark-Ground Illuminator—Bausch & Lomb.** A new type, invaluable for examination of objects invisible with ordinary means of illumination; consists of a reflector so constructed that the rays are made to strike the object at oblique angles corresponding to numerical apertures between 1.00 and 1.40, allowing only those rays to reach the eye which are diffracted by the object, which causes a dark field to be produced in which objects appear brilliantly illuminated; is interchangeable with Abbe condenser; requires a power light source such as sunlight, electric arc, Mazda, calcium or inverted incandescent gas lamp; furnished with printed directions Each 21.50

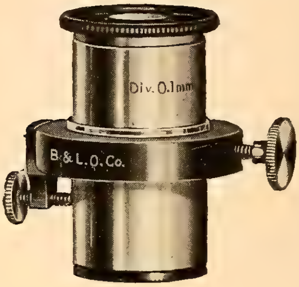
14125 **Funnel Stop**—For oil immersion objectives Each .90

14130 **Funnel Stop** for fluorite objective No. 14090-I Each 1.75

14150-A



14135



14150-B

14135 **Mechanical Stage—Bausch & Lomb.** For use on microscopes with square cornered stages; clamp is adjustable, front portion having top plate for instant leveling of stage; adjustment is by rack and pinion, giving equal speeds in both movements; slide-holder is provided with adjustable stops; main parts neatly finished in black lacquer to prevent reflections, scales are engraved on fine German silver...Each **27.50**

14138 **Micrometer Disc, Eyepiece, Whipple's,** having a large square divided into four, each of which is subdivided into twenty-five squares, and one of these again subdivided into twenty-five; used for counting bacteria ....Each **6.25**

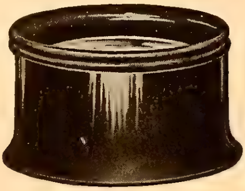
14140 **Micrometer Disc** for the examination of milk smears, having a circle 8 mm in diameter, with cross lines dividing it into quadrants......Each **3.50**

14150 **Micrometer Eyepieces—Bausch & Lomb.** Furnished in two forms, one with fixed and the other with movable scale. Scale is divided into tenths of a millimeter, with every fifth and tenth line longer than the others and every tenth line numbered.

	No. A	**B**
Magnification	7.5×	7.5×
Scale	Fixed	Movable
Each	**8.00**	**13.25**

14155 **Stage Micrometers—Bausch & Lomb.** Consist of slides, measuring 75 x 25 mm, upon which scales are mounted.

	No. A	**B**	**C**
Material	Glass	Glass	Metal
Ruled to	0.1 and 0.01 mm	0.01 and 0.001 in.	0.1 and 0.01 mm
Each	**5.00**	**3.50**	**14.50**

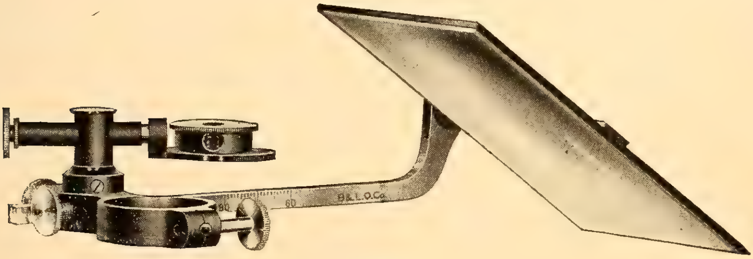


14160

14160 **Engravers' Glass—Bausch & Lomb.** Consists of two plano-convex lenses in vulcanite mounting; gives large flat field, with low magnification, and is especially suited for work with large dissections; should be used with a lens holder; equivalent focus, 75 mm. Valuable for counting colonies; diameter, 40 mm; magnification, 3.5x ....Each **3.50**

14165

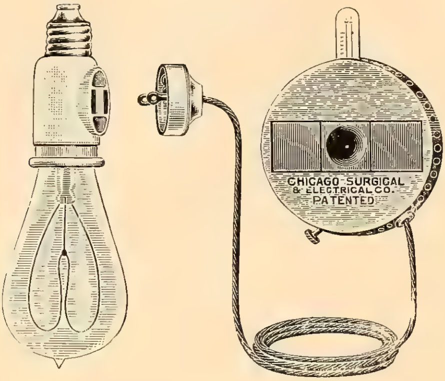
14165 **Camera Lucida—Abbe, Bausch & Lomb.** Clamp equipped with clamping screw conveniently placed so that it can be easily raised or lowered on eyepiece tube; prism is Abbe type, mounted on closed case, fixed in optical alignment; mirror is in fixed position close to prism, set at an angle of 30° from the horizontal ____________________Each 14.50



14170

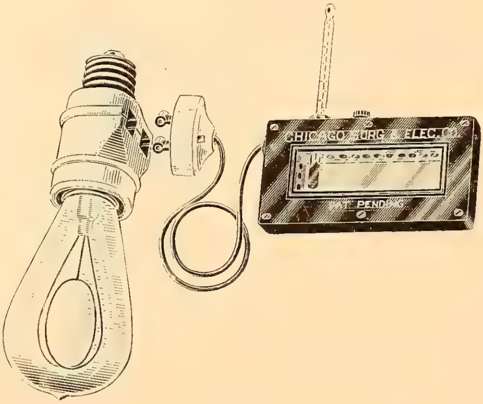
14170 **Camera Lucida—Abbe, Bausch & Lomb.** A new model for securing a large field with high power eyepieces; clamp has clamping screw conveniently placed so that it can be easily raised or lowered on eyepiece tube; prism is Abbe type in very compact case mounted on arm revolvable for direct examination of object; moderating on arm revolvable on vertical post, so that it can be turned to clear eyepiece for direct examination of object; moderating glasses are of two series, one mounted in rotating collar in prism case and other in revolving disc below the case; mirror bar is 12 cm long, graduated in millimeters, and movable to permit changing relative position of mirror to prism; mirror is extra large, 114 x 70 mm, point of attachment graduated in degrees to indicate angle at which mirror is set ____Each 30.00

"Bioloid" Stains and Reagents are Standard for Microscopical and Biochemical Requirements.



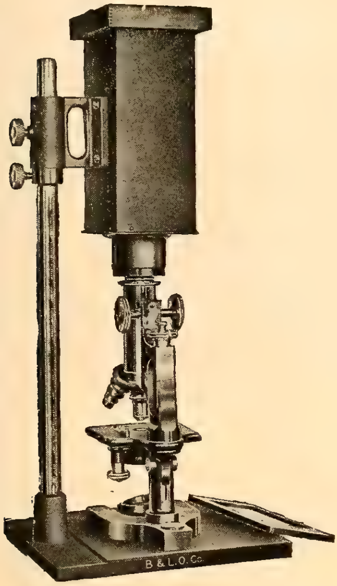
14175

14175 **Warm Stage for Microscope.** Most compact and convenient and always ready for use, as it fits the stage of any microscope without adjustment; with it micro-organisms, requiring blood heat temperature for maintaining their motility, can be readily discovered and examined; current can be drawn from any 110-volt lamp socket; measures 89 mm in diameter x 13 mm in thickness and has 19 mm aperture in center, over which regular microscope slide is placed; complete in every detail, with heating element, thermometer and an adjustable electric thermostat that automatically maintains a constant temperature on top of disc as long as current is turned on..Each **16.00**

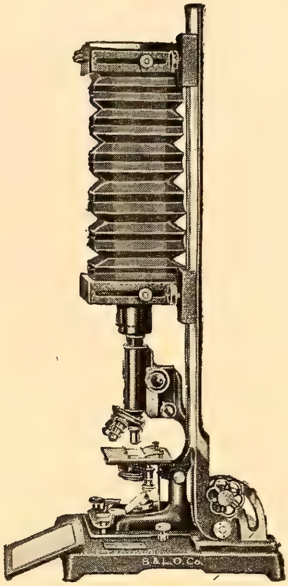


14180

14180 **Incubator for Microscope Stage.** This miniature incubator, complete in itself, fitting mechanical stage of any standard microscope; used to great advantage in Widal test for typhoid and particularly well adapted for observation of plant micro-organisms such as bacteria and yeasts in a hanging drop or hanging agar block, also for observation of micro-organisms such as malarial parasites, trypanosomes and amoeba; current can be drawn from any 110-volt circuit; incubating chamber measures 76 x 25 x 13 mm in depth and has removable glass bottom consisting of regular 75 x 25 mm slide; specimen to be examined is placed on this slide; condenser may thus be brought up close to slide as under ordinary conditions, permitting use of oil immersion lens; top of incubator is piece of clear mica, having an aperture cut in center through which lens is passed; incubator is complete with heating element, thermometer and adjustable electric thermostat; can be adjusted between 80° and 110° F; supplied in velvet-lined case ....Each **20.00**



14190

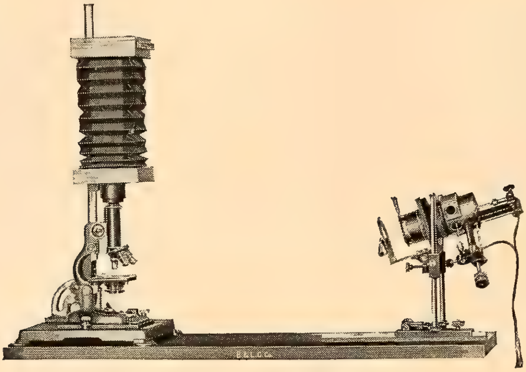


14200

Microphotographic Apparatus

Microphotographic Apparatus—Bausch & Lomb. Most complete line of microphotographic apparatus available today, including a model for every purpose for which photomicrography is employed; has been designed by the experienced technical staff of the Bausch & Lomb Optical Co. with a view of meeting all practical requirements of the operator in the most efficient manner possible; all outfits are produced with the same high degree of precision which characterizes the line of Bausch & Lomb microscopes, described on page 261; each outfit is here listed without microscope; while we recommend Bausch & Lomb microscopes for this work, each apparatus described below is made to accommodate any standard make of instrument.

14190	**Microphotographic Camera, Model K—Bausch & Lomb.** Designed especially to suit the convenience of the research worker, being so compact that it can be placed on the worker's table without interfering with his other operations making it easy to transfer the microscope to the apparatus; consists of heavy metal base, 9 x 10 in., wooden camera box, with fixed length of 10 in., frame to accommodate the ground-glass, and double plate-holder taking 3¼ x 4¼ in. plates; camera may be rotated about upright rod to align it with microscope; furnished without shutter ________ Each	35.00
14195	**Automatic Shutter.** Has steel leaves with maximum opening of 40 mm, and may be set for instantaneous, bulb or time exposure________ Each	17.50
14200	**Microphotographic Camera, Model H—Bausch & Lomb.** Designed for medium power work in any laboratory; consists of heavy base, 13 x 9¾ in., adjustable plate, 8 x 6 in., to carry microscope, optical bed, 25 in. long, graduated to 60 cm, carrying camera parts and provided with inclination joint, which permits it to be adjusted at any angle between horizontal and vertical; two camera supporting frames are clamped to optical bed and carry bellows long enough to accommodate work at any distance along the bed; focusing screen of ground glass, with clear center, slides in two grooves in camera box; microscope plate has movement of 4½ in., which, with adjustment of camera supports, enables operator to align microscopes of different dimensions; adjustment on plate will accommodate any standard microscope; furnished without shutter; for 4 x 5 in. plates_____ Each	75.00
14205	**Automatic Shutter.** Similar to No. 14195 above ________ Each	17.50

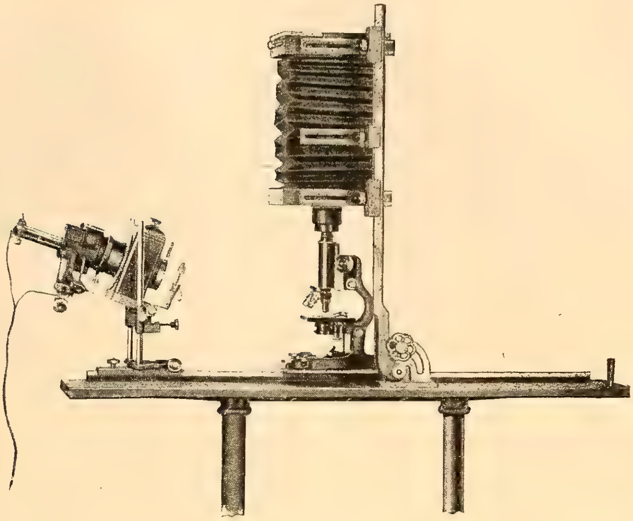


14210

14210	**Microphotographic Camera, Type RA-5—Bausch & Lomb.** This is a very satisfactory camera for photomicrographic work in conjunction with any standard type of microscope, such as the Bausch & Lomb FFS model (see page —), if a moderate-priced outfit is desired; base consists of heavy base board, 12 x 45 in., with section of optical bed supporting illuminating system and four brackets holding base of camera in place; illuminating system consists of 5-ampere, 90° hand-feed arc lamp with rheostat for 110-volts, aspheric condenser in focusing mount, one ground glass, and one blue and one green glass filter, all mounted on support adjustable for height and with micrometer adjustment for vertical and lateral movement; camera consists of heavy iron base, 10 x 12½ in., secured in position by brackets, sliding microscope plate with clamps, bed 25 in. long, graduated to 60 cm, with inclination joint, supporting standards, bellows, frames, bellows front board with light-tight connector for microscope, 4 x 5 in. double plate-holder and ground glass focusing screen ----------Each	162.75
14215	**Microphotographic Camera, Type RM-5—Bausch & Lomb.** Same as No. 14210 above, but with 6-volt Mazda lamp and transformer for 110-volt, alternating current ----------Each	152.75

MICROPHOTOGRAPHIC SUPPLIES

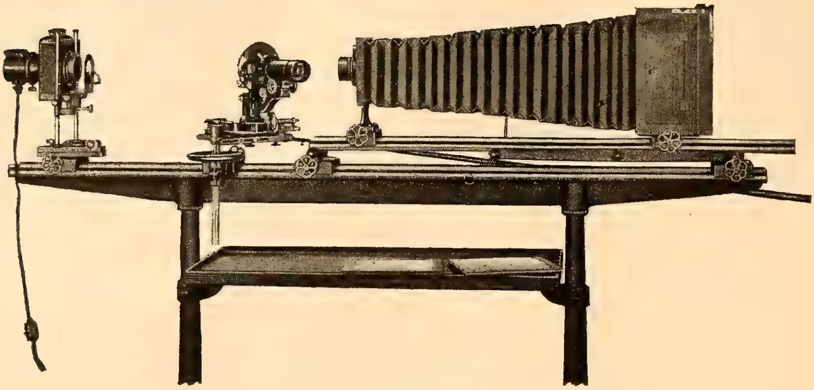
We furnish all requisites for microphotographic processes, from preparing the specimen to printing of the picture.



14220

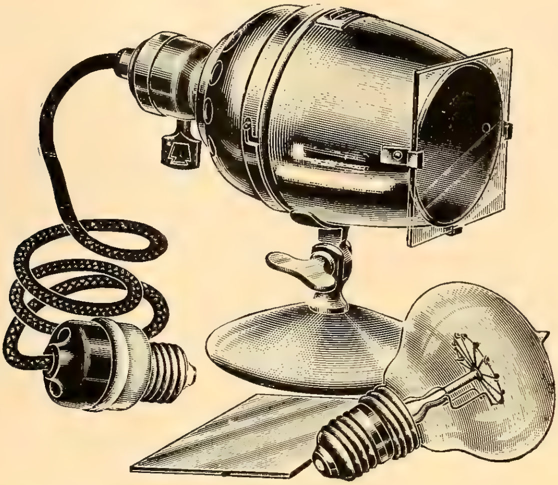
14220 **Microphotographic Camera, Type LDA-7—Bausch & Lomb.** Arranged so that it may be used for photomicrography with the microscope either in a horizontal or vertical position, and also for drawing by directing the image on a horizontal drawing board by means of a reflecting mirror placed over the eyepiece; is very rigidly constructed and very satisfactory for general laboratory work; drawing board is of wood, neatly finished, 14 in. square, adjustable on front standard of supporting stand, which is graduated so that one can readily reset the board at any particular position, and supplied with velvet hood on adjustable standard to shield board from light when desired; supporting stand is of cast iron, with feet having lateral spread of 25 in.; base plate, carrying camera bed and optical bed for illuminating accessories and microscope plate is 45 x 7 in. and 39 in. from floor; illuminating system consists of 5-ampere, 900 hand feed arc lamp with rheostat for 110 volts, aspheric condenser in focusing mount, support for ray filter, one ground glass, one blue glass and one green glass filter, all mounted on support adjustable for height and with micrometer adjustment for vertical and lateral adjustment; microscope plate is attached to optical bed by means of clamps so that the microscope can be moved along the optical bed to bring it to the desired location either for drawing or for connection with the camera; camera has optical bed 25 in. long, graduated to 60 cm, with inclination joint, bellows, ground-glass, one double plate-holder for 5 x 7 plates and wooden frames attached to two supports on optical bed, upon which they are adjustable to bring center of camera into alignment with microscope; front board of camera is fitted with automatic shutter and light-tight connector for microscope ---Each 275.00

14225 **Microphotographic Camera, Type LDM-7—Bausch & Lomb.** Same as No. 14220 above, but with 6-volt Mazda lamp and transformer for 110-volt alternating current ----------------------------------Each 265.00



14235

14230	**Microphotographic Camera, Type GPA—Bausch & Lomb.** Recommended to those who wish an apparatus of unusual rigidity and mechanical accuracy, particularly where high magnifications are to be undertaken; support for microscope is adjustable for height so that any standard type of microscope may be used and brought into alignment with the center of the camera parts; microscope plate may be turned 90° to enable one conveniently to look directly into microscope for searching the field to be photographed; supporting stand, of cast iron and massive construction, contains two upright supports that carry the optical bed at height of 42 in. from floor; optical bed, graduated in millimeters and centimeters with every fifth centimeter numbered, is 78 in. long and 4½ in. wide; illuminating system consists of 5-ampere, 90° hand-feed arc lamp with rheostat for 110 volts, aspheric condenser in focusing mount, support for ray filter, one ground glass, one blue and green glass filter, all mounted on support adjustable for height, with micrometer adjustment for vertical and lateral movement; camera consists of supports carrying tapering bellows with draw of approximately 50 in., having wire supports in center, the rear support carrying box of neatly finished hard wood, with reversible adapter carrying special laboratory plate holder for 8 x 10 in. plates and kits for small sizes, also with two focusing screens, one ground glass with clear center and one clear with graduated cross lines in center; automatic shutter, with steel leaves having maximum opening of 40 mm, may be set for instantaneous, bulb or time exposure; microscope plate is of metal, 7¼ x 5¼ in., and provided with leveling screws to serve in bringing any microscope into exact alignment with optical axis of camera ________Each	447.00
14235	**Microphotographic Camera, Type GPVA—Bausch & Lomb.** Same as No. 14230 above, but with supplementary optical bed permitting use of camera in either horizontal or vertical position________Each	519.00
14240	**Microphotographic Camera, Type GPM—Bausch & Lomb.** Same as No. 14230 above, but with 6-volt Mazda lamp and transformer for 110-volt, alternating current ________Each	437.00
14245	**Microphotographic Camera, Type GPVM—Bausch & Lomb.** Same as No. 14240 above, but with supplementary optical bed, permitting use of camera in either horizontal or vertical position________Each	509.00
14250	**Achromatic Focusing Glass—Bausch & Lomb.** A triple aplanat magnifier, giving large field and perfect correction________Each	10.00
14255	**Doublet Focusing Glass—Bausch & Lomb** ________Each	5.00



14250

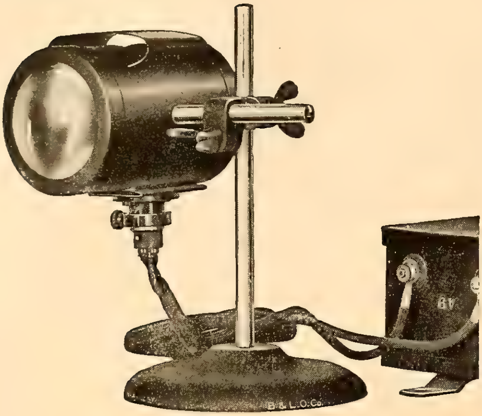
Microscope Lamp—"Radio." An excellent lamp for general laboratory use. The housing is of sheet metal, nickel-plated, and so constructed that no light can escape housing to irritate the eyes. Well ventilated and furnished with a joint so that lamp may be tilted at any angle. The "Radio" globe of 40 watts has a very concentrated metal filament, the greater part of the light being thrown to the front.

For darkfield examination the "Radio Darkfield" lamp drawing 100 watts and nitrogen filled is used in connection with an adaptor to allow for accommodation of the nitrogen bulb; "Daylite" and plain ray filters can be supplied for use in the above. "Radio-Combination" lamp with regular "Radio" and "Radio-Darkfield" globe makes a source of illumination for all kinds of work by merely changing the globe.

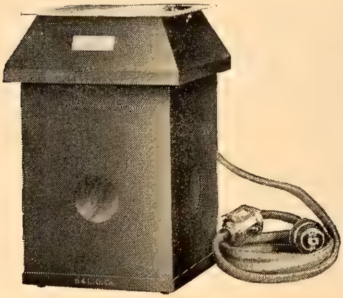
14250	"Radio" Lamp, 110 volts, complete with "Radio" Globe, one Ray Filter Blue and one White-Ground, six ft. wire cord and plug, ready for connection	Each	11.00
14251	"Radio" Lamp, 220 volts, complete with "Radio" Globe, one each Ray Filter Blue and one White-Ground, six ft. wire cord and plug, ready for connection	Each	11.50
14252	"Radio" Lamp for Darkfield illumination, 110 volts, complete with "Radio-Nitrogen" Globe, one each Ray Filter Blue and one White-Ground; six ft. wire cord and plug, ready for connection	Each	14.50
14253	"Radio" Lamp for Darkfield illumination, 220 volts, complete with "Radio-Nitrogen" Globe, one each Ray Filter Blue and one White-Ground! Rheostat 220 volts for "Radio-Nitrogen" Globe; six ft. wire cord and plug, ready for connection	Each	21.00
14254	"Radio-Combination" lamp for Darkfield and regular miscoscopic illumination, 110 volt, complete with adaptor for Nitrogen Globe, one "Radio" Globe and one "Radio-Nitrogen" Globe; one each Ray Filter Blue and one White-Ground; six ft. wire cork and plug, ready for connection	Each	17.50
14255	"Radio-Combination" Lamp for Darkfield and regular microscopic illumination, 220 volts, complete with adaptor for Nitrogen Globe, one "Radio" Globe and one "Radio-Nitrogen" Globe; one Ray Filter Blue and one White-Ground, Rheostat for 220 volts, six ft. wire cord and plug, ready for connection	Each	24.00

Accessories:

15260	"Radio" Globe, 110 volts	Each	1.60
15261	"Radio" Globe, 220 volts	Each	2.20
15262	"Radio-Nitrogen" Globe, 100 watt, 110 volts	Each	2.20
15264	Daylite Filter for above lamps	Each	3.00
	Note. Daylite Filter when furnished with any of the above lamps	Each	2.00

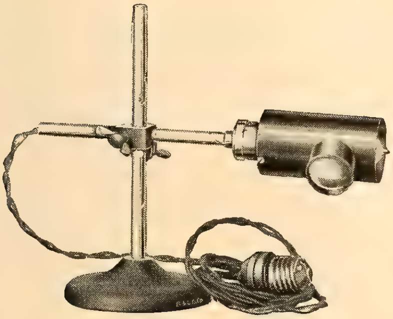


14270

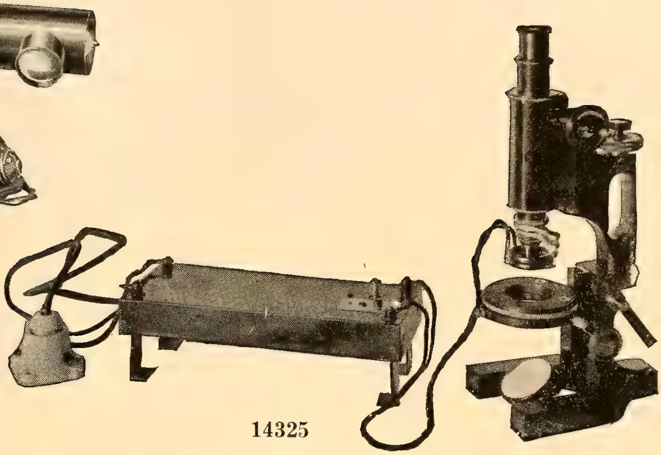


14290

14270	**Mazda Lamp, Adjustable—Bausch & Lomb.** This is a 6-volt, 24-watt, gas-filled Mazda, a new development in illumination; the filament is so concentrated that the light approximates the ideal point-source, thereby giving higher efficiency and permitting the use of a shorter focus condensing lens; lamp socket is carried in a sliding plate which runs the length of the housing and permits the lamp to be adjusted with reference to the condenser; condensers are of two types, either the ordinary bi-convex or our aspheric type; current can be drawn from any lamp socket, using a transformer on alternating current and a rheostat on direct current; furnished with regular spherical condensing lens and transformer for 110-volt, A. C. circuit	Each	23.50
	6-volt, 24-watt, gas-filled Mazda Lamp. For use with above lamp; bulb only	Each	1.25
14275	**Microscope Lamp—Adjustable, Bausch & Lomb.** Same as No. 14270 above, but with Aspheric Condenser, which is corrected for spherical aberration	Each	35.50
14280	**Microscope Lamp, Adjustable—Bausch & Lomb.** Same as No. 14270, but with rheostat for 110 volts D. C. or A. C. circuits in place of transformer	Each	24.50
14285	**Microscope Lamp—Adjustable, Bausch & Lomb.** Same as No. 14280 above, but with Aspheric Condenser, which is corrected for spherical aberration	Each	36.50
14290	**Microscope 100-Watt Lamp—Bausch & Lomb.** Made in strict accordance with specificaions of Professor Simon H. Gage, Cornell University; designed for use of one or more workers; illuminant is 100-watt Mazda in light-tight housing; lamp is furnished with Corning-Daylite Glass windows; unused opening is closed by shields which may be removed for insertion of Daylite Glass filters, permitting lamp to be used by two students; lamp bulb is adjustable for bringing filament opposite windows; top of lamp is a warming plate for slides; housing has no bottom and may be placed over dishes used in heating paraffin, etc.; furnished with 6-foot cord, switch, plug and one Corning-Daylite Glass filter	Each	14.50
	Corning-Daylite Glass Filters. For use with above lamp	Each	2.00
	Resistance. For 100-watt lamp on 220-volt circuit	Each	8.00
	100-watt Lamp. Bulb only; for use with above lamp	Each, net	1.35
14295	**Microscope 100-Watt Lamp—Bausch & Lomb.** Same as No. 14310 above, but with Corning-Daylite Glass filters	Each	16.50



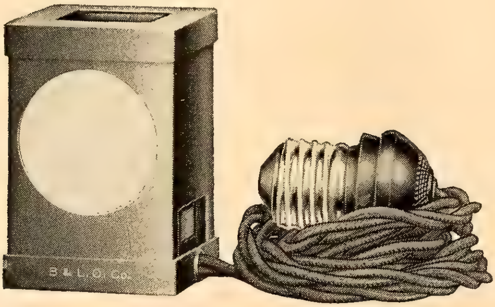
14300



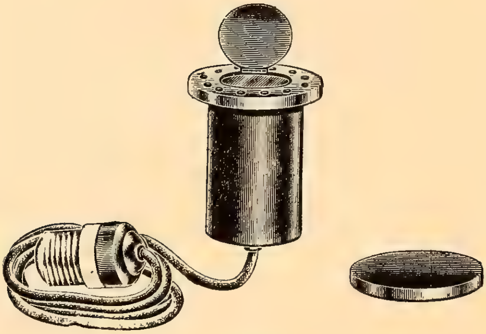
14325

14300	**Microscope Lamp—Small, Bausch & Lomb.** Is readily adjustable and, when used with condenser, has the requisite intensity for all ordinary work, including oil immersion; illuminant is a 15-watt Mazda lamp, enclosed in cylindrical metal shade; current can be drawn from any lamp socket on 110-volt circuit, direct or alternating, without use of rheostat or transformed; furnished complete with 6-foot cord, plug, Corning-Daylite Glass filter, and condensing lens___Each	13.00
	Corning-Daylite Glass Filter. For above lamp; in mount, to fit over condensing lens ___Each	1.75
	Condensing Lens. For above lamp; mounted ___Each	2.75
	Resistance Unit. For use with 15-watt 110-volt lamp on 220-volt circuit ___Each	4.25
14305	**Microscope Lamp—Small, Bausch & Lomb.** Same as No. 14320 above, but without Corning-Daylite Glass ___Each	11.25
14310	**Microscope Lamp—Small, Bausch & Lomb.** Same as No. 14320, but without filter or condensing lens ___Each	8.50
14315	**Microscope Hand-feed Arc Lamp—Bausch & Lomb.** Designed especially for use with the microscope; may be run from any house-circuit socket by interposing a rheostat, is mounted on a stand with provision for setting at proper height and tilt, as to the microscope mirror; has a bull's-eye condenser in sliding tube for focusing___Each	23.50
14317	**Rheostat.** For use with above Arc Lamp. Constructed to meet the requirements of the National Board of Underwriters' Laboratory. Furnished with case of perforated metal. Resistance coils carried on porcelain spools with no exposed contact points. Can be used on ordinary lamp circuits. For 4½ amperes, 110 volts, supplied with cord, plug and pass-through switch ___Each	8.75
14318	**Rheostat.** Same as above No. 14337, but for 220 volts___Each	11.50
14325	**Microscope Illuminator—Silverman's.** Can be used in practically every field of microscopy; consists of a circular source of light surrounding the objective and furnishing a diffused and uniform illumination at the spot to be examined; absorption disk is of blackened brass; furnished with tungsten lamp, flexible cord with attachment plug for connecting electric light socket with rheostat, stage adapter and rheostat for 104 to 124 volts___Each	45.00
14330	**Microscope Illuminator—Silverman's.** Same as No. 14300 above, but with rheostat for 208 to 248 volts___Each	46.00
	Extra Lamps. Colorless glass ___Each	4.00
	Extra Lamps. Daylight (blue) glass ___Each	4.50

(Please state voltage and current when ordering)



14335



14340

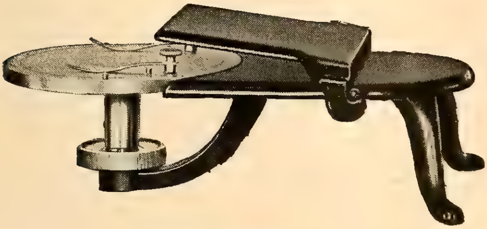
14335 **Microscope Substage Lamp—Bausch & Lomb.** Is of unusual compactness and efficiency; complete outfit is placed under the microscope stage, the mirror being turned aside so that lamp sends its rays directly to the specimen; illuminant is small 15-watt Mazda lamp, 110-115 volts, direct or alternating current, connecting with any lamp socket; housing, of metal, has double, ventilated sides and top; deep-curve reflector fixed behind lamp bulb intensifies the illumination; furnished with five and one-half feet of silk-wound cord with plug, one blue glass and one ground glass................Each 6.00

Resistance Unit. For use with 15-watt, 110-volt lamp on 220-volt circuit ....Each 4.25

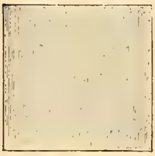
15-watt Lamp. Bulb only; for use with above lamp................Each 1.00

14338 **Microscope Substage Lamp—Bausch & Lomb.** Same as No. 14340 above, but with Corning-Daylite Glass in place of blue and ground glasses ....Each 7.00

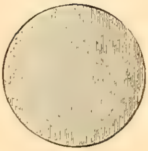
14340 **Microscope Illuminator.** Originally designed to be embedded in table top for obtaining direct light, but can also be used in ordinary way, on top of table, for deflected light; for this purpose a hinged leg support is provided, whcih can be folded out of the way when not in use; light is provided by 15-watt, gas-filled, concentrated filament bulb, with a reflector to concentrate and intensify it; housing is of metal, finished in black, with hinged cover to protect the daylight lens when not in use; dimensions of illuminator, over all: length, 100 mm; largest diameter, 64 mm; smallest diameter, 50 mm; to prevent overheating, ventilator holes are provided both at top and bottom, allowing continuous circulation of air, but no escapement of light except through daylight lens; cover is furnished for closing hole through table, when illuminator is removed................Each 6.00



14350



14355



14360

14375

14350 **Turn-Table—Bausch & Lomb.** A necessary accessory in ringing mounts and making cells; consists of metal table, with detachable hand rest, and revolving disc immediately in front of table, accurately mounted upon a bearing so that slide may be made to revolve to high speed; revolving disc, 88 mm in diameter, has concentric circles engraved in center to assist in centering slide ________________Each 7.00

14355 **Cover Glasses.** Of superior quality, true to size, uniform in color and smoothly cut; No. 1 thickness varies from 0.13 to 0.17 mm; No. 2 from 0.17 to 0.25 mm; No. 3 from 0.25 to 0.50 mm; square, 100 in a box or in half-ounce packages.

No.	A	B	C	D	E	F	G	H	I
Size, in mm	18	18	18	22	22	22	25	25	25
Thickness	No. 1	No. 2	No.3	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3
Per oz.	1.25	1.10	1.00	1.25	1.10	1.00	1.25	1.10	1.00

14360 **Cover Glasses.** Same as No. 14355 above, but round.

No.	A	B	C	D	E	F	G	H	I
Size, in mm	18	18	18	22	22	22	25	25	25
Thickness	No. 1	No. 2	No.3	No. 1	No. 2	No. 3	No. 1	No. 2	No. 3
Per oz.	1.25	1.10	1.00	1.25	1.10	1.00	1.25	1.10	1.00

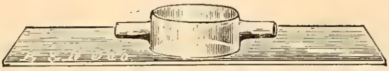
14365 **Cover Glasses.** Same as No. 14355, but rectangular.

No.	A	B	C	D
Size, in mm	22 x 40	22 x 40	24 x 50	24 x 50
Thickness	No. 1	No. 2	No. 1	No. 2
Per 10	.25	.25	.30	.30
Per oz.	1.25	1.10	1.40	1.25

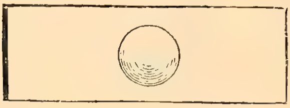
14375 **Object Slides.** Made of domestic crown glass, free from defects, of uniform thickness and color, with edges ground; object slides of selected measured thickness will be furnished at prices double those listed.

No.	A	B	C
Size, in mm	25 x 75	25 x 75	25 x 75
Thickness	Medium	Medium	Extra Thin
Color	Half White	White	Half White
Per gross	1.20	1.50	1.20

No.	D	E
Size, in mm	38 x75	50 x 75
Thickness	Medium	Medium
Color	Half White	Half White
Per gross	2.50	3.00



14390



14380

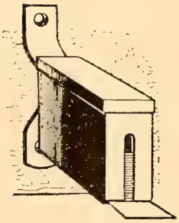
14380 **Object Slides.** For culture work; with concave depression, ground in the slide and polished; regularly supplied in packages of ten; size, 25 x 75 mm; thickness, medium ---- Per 10 .75

14385 **Object Slides.** For culture work; has one cavity, 16 mm in diameter, in polished plate glass; regularly supplied in packages of ten; size, 25 x 75; extra thick ---- Per 10 2.00

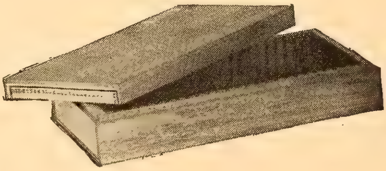
14390 **Object Slide.** For moulds; consists of glass ring with ground-in side tubes, attached to 25 x 75 mm slide without use of cement, making it suitable for most delicate cultivations; diameter of cell, 17 mm; depth, 12 mm; length of tubes, 60 mm ---- Each 1.25

14392 **Slide Mounting Cells, Glass.** These rings are of heavy glass with finely ground edges for cementing on microscope slides to made cells.

No.	A	B	C	D	E
Diameter, mm	15	18	18	22	24
Height, mm	3	5	10	9	10
Each	.20	.20	.18	.18	.18



14395



14410

14395 **Slide Box—Laboratory Micro.** Most convenient for keeping glass slides within quick reach; may be placed in any convenient place in the laboratory; made of Monel metal, very strong ---- Each 3.25

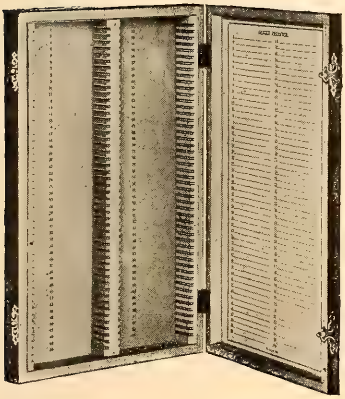
14400 **Slide Box—Laboratory Micro.** Same as above No. 14395, but made of aluminum ---- Each 2.00

14405 **Slide Boxes.** Substantially made of light wood; supplied with index and label for recording titles; covers fit tight inside the edges.

No.	A	B
Capacity	12	25
Size of slides, in mm	25 x 75	25 x 44
Per 10	1.25	2.00

14410 **Slide Boxes.** Same as No. 14405 above, but with covers that fit over the top, so that when they are removed the slides, projecting above the box edges, can be easily removed.

No.	A	B
Capacity	25	25
Size of slides, in mm	50 x 75	25 x 75
Per 10	3.25	1.75



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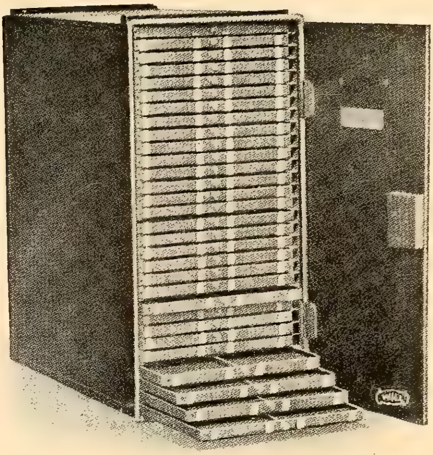


14430

14420

14415 **Slide Boxes.** A very compact and convenient slide box; made of wood and heavy cardboard, suitably covered; provided with numbered slide index, and register for recording data of interest; cover is hinged and fitted with catches, and when raised exposes slides so that they can be removed easily; box is divided into two rows, with a capacity for 100 slides; size of slides, 25 x 75 mm............Each .90

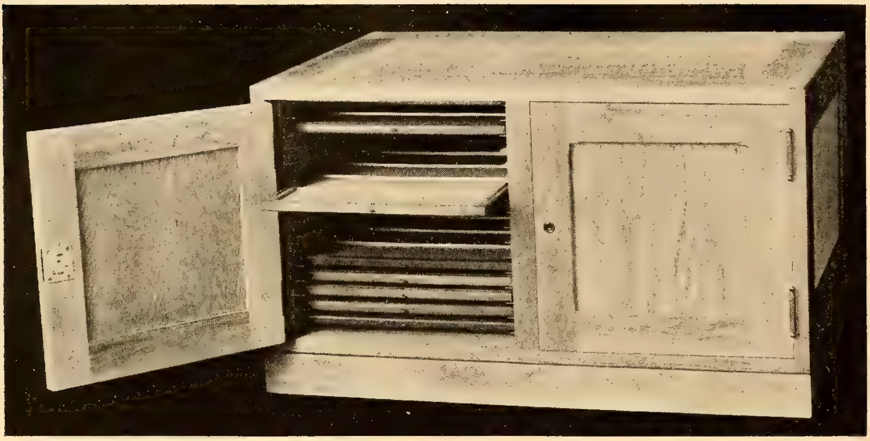
14420 **Slide Mailing Case.** Made of a good quality of tin; will accommodate one standard slide ....Per dozen 1.10
Per hundred 5.75

14425 **Slide Mailing Case.** Afford a safe method of mailing one or more slides in compact form; made of wood, with each section exactly the same as the others; recess is of sufficient size to hold slides with large or thick cells or covers; any number may be piled up with slides between sections, or two may be reversed and used for mailing one slide, size of slides, 20 x 75 mm ....Per dozen pieces .30

14430 **Slide Cabinet—Minot's.** Designed by the late Dr. Charles S. Minot; of metal; very compact, occupying much less space than wooden cabinet, strongly made throughout and neatly finished on outside in maroon-colored japan with bronze stripes, inside being finished in black japan; contains 30 japanned metal trays, each holding 24 glass slides, 75 x 25 mm; trays are provided with convenient knobs and card holders; new and improved construction of trays holds each slide independently in place, preventing shaking or slipping when trays are removed; cabinet is furnished with brass lock; outside dimensions: height, 36.5 cm; depth, 32.5 cm; width, 17.5 cm; capacity, 720 slides; furnished complete with 30 trays ....Each 43.50

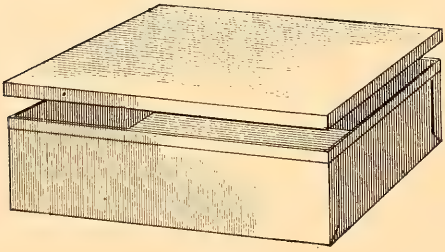
SLIDE CABINETS

We manufacture according to any specification. Send us your drawing and bill of materials and we will do the rest.

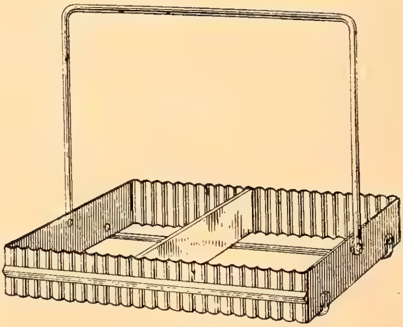


14435

14435 **Slide Cabinet.** Contains two independent tiers of fifteen drawers eash, provided with space for 1500 slides to lie flat. Each drawer slides freely on metal runs, making it possible to remove any drawer without disturbing others. Cabinet is dust tight and slides rest only on their two edges, making it very convenient for removing single slides. Very well made and finished in oak ....Each 50.00



14439



14438

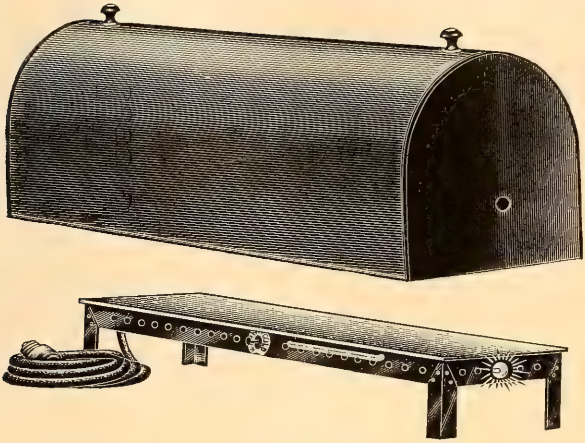
14438 **Slide Immersion Racks.** Designed for staining purposes.

No.	A	B
Capacity, slides	24	50
Each	6.50	8.50

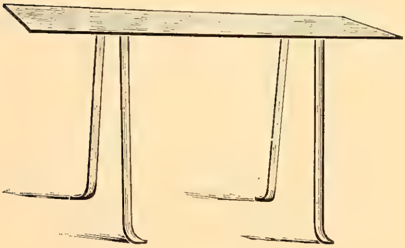
14439 **Slide Staining Cases.** For euse in connection with above racks, being somewhat larger than racks; made of tin or Monel metal with tin lids; a set should include such a number of cases as will provide a tin case for such fluids as do not rust and Monel metal cases for fluids which will be affected by tin or iron, as this metal is non-corrosive.

Size	No. A Small	B Large
Made of Tin, each	.95	1.10
Made of Monel metal	2.40	2.90

17053 **Staining Basket-Slide Holder.** After suggestions by Dr. S. H. Gage of Cornell University. Made of nickeled brass. Slides held apart by comb arrangement. Holds slides and can be used in any receptacle for stain ....Each 2.00



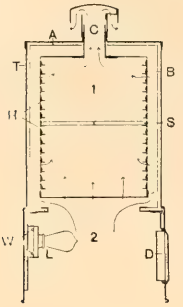
14440

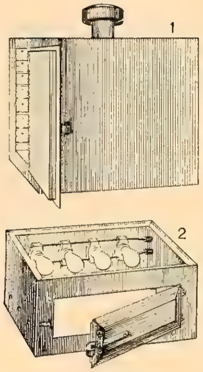


14445

14440 **Slide Warmer, Electric.** Designed by Professor S. Walter Ranson, of Northwestern University Medical School, to provide convenient method of mounting paraffin sections; slides are heated slowly and evenly over entire extent to a temperature just below melting point of the paraffin, thereby giving maximum flattening without damage to specimen; block of transite, 61 cm long, 15 cm wide and 6 mm thick, is mounted on brass frame and heated by series of nichrome wires embedded in the block; connection may be made with any lamp socket and temperature held constant at any desired point by electric thermostat; thermometer is placed just below block of transite and registers a temperature somewhat lower than that on surface; with paraffin of 55°, best results are obtained when regulator is set to maintain thermometer temperature of 43°; accommodates 40 slides, which are protected from dust while drying by a metal hood placed over apparatus; with this slide warmer drying is cut down from 24 hours at room temperature to 2 or 3 hours at a temperature just under paraffin melting point -- Each 40.00

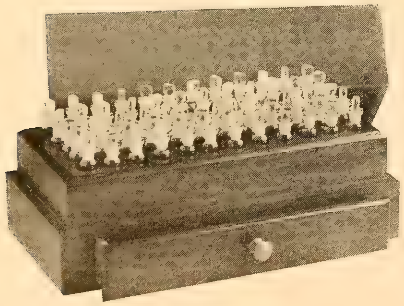
14445 **Slide Warming Table.** Designed by Professor Carl Huber; intended for fixing blood preparations to be stained by Ehrlich method, also for fixing sections to slides, drying, mounting, etc.; top is of copper, with rounded edges; legs are removable; dimensions: height, 20 cm; width, 10 cm; length, 39 cm-- Each 2.40





14460

14460 **Slide Tray Drying Oven.** Of metal, with asbestos lining on outer casing; accommodates 15 slide trays; heat is furnished by four incandescent electric bulbs in base and can be varied by turning off one or more of the bulbs; oven is provided with numerous ventilating holes, with flue for escape of air at the top; convenient door affords access to base -- Each 50.00



14171

14173

14171 **Reagent Cabinet, for Microchemical Analysis.** Designed after suggestions by Prof. E. Chamot and consists essentially of block to contain the sixty reagent vials, lettered and numbered, with cover to protect from dust, and drawer below to contain forceps, crucibles, crucible holders, filtering apparatus, etc. Cabinet is of mahogany, beautifully finished and very compact ------------------------------------ Each 10.00

14172 **Reagent Cabinet.** Same as above No. 14171, but of poplar, mahogany finish -- Each 8.00

We can also furnish 2 cc vials and reagents for the above, as well as crucibles, forceps, micro-filters, etc., as described in Prof. Chamot's book, "Elementary Chemical Microscopy." Information on application.

14173 **Reagent Block for Microchemical Analysis,** as suggested by Prof. E. Chamot of Cornell University. A mahogany block containing openings for sixty 2 cc reagent vials, each hole lettered and numbered so that reagents may be instantly located ------------------------ Each 5.00

14174 **Reagent Block,** same as above No. 14173, but of poplar, mahogany finish -- Each 4.00

Slides Mounted

14465	**Pathogenic Micro-organisms from Cultures.**		
	Bac. acne	Each	.50
	Bac. aerogenes capsulatus welchii	“	.50
	Bac. anthracis	“	.50
	Bac. of Bordet-Gengou (whooping cough)	“	.50
	Bac. cholera-suis (hog cholera)	“	.50
	Bac. coli-communis	“	.50
	Bac. diptheria of Ducrey	“	.50
	Bac. sysenteriae ,dysentery)	“	.50
	Bac. influenzae (influenze)	“	.50
	Bac. lepra (Duval)	“	.50
	Bac. of Koch Weeks	“	.50
	Bac. icteroides of Sanarelli (yellow fever)	“	.50
	Bac. mallei (Glanders)	“	.50
	Bac. pestis (bubonic plague)	“	.50
	Bac. pyocyaneus (blue or green pus)	“	.50
	Bac. tetani (lockjaw)	“	.50
	Bac. tuberculosis, human	“	.50
	Bac. typhosus	“	.50
	Pneumococcus (Micrococcus lanceolatus)	“	.50
	Spirochaeta Obermeiri	“	.75
	Staphylococcus pyogenes albus	“	.50
	Streptococcus erysipelatis	“	.50
14470	**Phylum Protozoa—Class Sporozoa.**		
	Haemogregarines in frogs blood	“	1.00
14475	**Phylum Platyhelmintes—Class Trematoda.**		
	Distomum Lanceolatus, E	“	1.75
	Taenia solum, head	“	2.50–5.00
14480	**Phylum Nemathelmintes—Class Nematoda.**		
	Trichna spiralis in flesh	“	.50
14485	**Non-Pathogenis Micro-Organisms from Cultures.**		
	Bac. acidi lactici-Bulgaricus	“	.50
	Bas. subtilis (hay)	“	.50
	Sarcina lutea	“	.50
	Yeast, red	“	.50
14490	**Smears from Pathological Processes.**		
	Tertial malaria	“	1.25
	Trypanosoma lewisi	“	2.50
	Gonococci in urethral discharge	“	1.00
	Hook Worm, male or female	“	1.25
	Hook Worm, male and female	“	2.00
14495	**Slides—Microscope, Human Histology.**		
	Artery, T. S. showing three coats	“	.40
	Blood: anaemia, D. S.	“	.40
	Blood: leukaemic, D. S.	“	.40
	Bone, L. S.	“	.75
	Bone, T. S.	“	.75
	Cartilage, hyaline	“	.40
	Cerebellum: gray and white matter nerve cells and fibres, cells of Purkinje	“	.40
	Cerebellum: cortical and medullary parts	“	1.50
	Cerebellum; Nissl stain	“	1.50
	Cerebral Cortex: Golgi stain	“	1.50
	Cerebral Cortex: Nissl stain	“	1.50
	Cerebral Cortex: Weigert stain	“	1.50
	Crystalline lens: capsule and lens fibres	“	.50
	Heart: cardiac cells, striations, etc., D. S.	“	.40
	Intestine, large, D. S.	“	.40
	Intestine, small	“	.40
	Kidney: cortical part, glomerulae tubules, etv., D. S.	“	.40
	Kidney: medullary part, straight vessels, Henles tubes and loop, D. S.	“	.40
	Liver, D. S.	“	.40
	Liver, single stained	“	.40
	Liver, showing inter-and intralobular and central veins	“	.50
	Lung: bronchi, bronchiolis, mucosa, etc., D. S.	“	.40
	Lung: cells and structure of alveolar walls, D. S.	“	.40
	Lymph gland: tissue, corpuscles and fibrous corpuscles, D. S.	“	.40
	Mammary gland: ducts, acini, etc.	“	.40

14500 Medulla (Weigert stain).

Level of sixth and seventh nerves	Each	1.50
Olivary level, lower	“	1.50
Olivary level, middle	“	1.50
Olivary level, upper	“	1.50
Pyramidal decussation	“	1.50
Membrane: mucous from bladder	“	.40
Membrane: mucous from oesphagus and trachea	“	.40
Membrane: serous from omentum, inter cellular space stained with silver nitrate	“	.60
Muscle: voluntary, teased, showing capillary supply, striae, primative fibrillae, etc.	“	.40
Muscle: voluntary, L. S.	“	.40
Muscle: voluntary, T. S. fasciculi, endomysium, and ferimysium	“	.50
Muscle: involuntary. Teased preparation	“	.40
Muscle: involuntary, from stomach, L. S.	“	.40
Nerve fibres: teased preparation, D. S.	“	.50
Nerve cells: smear preparation	“	.40
Nerve fibres: medullated, Picroacid-fuchsin stain	“	1.50
Oesphagus: mucous membrane and muscular coat	“	.40
Optic nerve: transverse section, D. S.	“	.40
Optic nerve: longitudinial section, D. S.	“	.40
Ovary: T. S. stroma and follicles, D. S.	“	.40
Ovary: L. S., D. S.	“	.40
Pancreas: acini and ducts	“	.40
Pylorus and duodenum, L. S. through both D. S.	“	.40
Scalp: Negro: pigmentary superficial and deep layers, hair, hair follicles, sebaceous and sweat glands, etc.	“	.40
Scalp: white	“	.40
Skin: Negro: pigmentary layer, epidermis and corium	“	.40
Skin: white, sweat glands, etc.	“	.40
Spinal cord: cervical, entire T. S., D. S.	“	.50
Spinal cord: cervical, L. S.	“	.50
Spinal cord: cervical, enlargement, Picroacid-fuchsin stain	“	1.25
Spinal cord: cervical, high, Weigert stain	“	1.25
Spinal cord: lumbar, Weigert stain	“	1.25
Spinal cord: mid-dorsal, Weigert stain	“	1.25
Spinal cord; sacral, Nissl stain	“	1.50
Spinal cord: sacral, Weigert stain	“	1.25
Spleen: Traebeculae and malphigian corpuscles, D. S.	“	.40
Stomach: cardiac portion, D. S.	“	.40
Stomach: pyloric portion, D. S.	“	.40
Suprarenal capsule	“	.50
Testicle, T. S., double stain	“	.50
Thymus gland, follicles and fibrous septa	“	.40
Thyroid gland, acini with colloid section, etc.	“	.40
Tissue, adipose	“	.30
Tissue, connective, umbilical cord	“	.40
Tissue, white fibrous, L. S.	“	.50
Tissue, yellow elastic from aorta, L. S.	“	.50
Tongue, mucosa and muscular structure	“	.35
Tooth, L. S.	“	1.00
Tooth, T. S.	“	1.00
Uterus, mucosa and involuntary muscle fibres	“	.50
Vagina: mucosa, muscular fibrous tissue, D. S.	“	.40
Vein: T. S. three coats, D. S.	“	.40

14505 Embryological Series.

Arm, L. S.	“	.50
Bone development	“	.75
Finger: nail tissue, etc.	“	.50
Leg, L. S.	“	.50
Liver, T. S.	“	.50
Lung, T. S.	“	.50
Spinal column, T. S.	“	.50
Spinal cord, at term, Weigert stain, T. S.	“	1.50
Tissue, connective	“	.40
Umbilical cord, T. S.	“	.40

14510 **Slides—Microscope.** For elementary physiology; double stained and of best quality; arranged for course outlined by Regents Syllabus; other slides of same prices may be substituted for those listed; furnished in sets of 25, in a case ---------------------------Per case **10.00**

- Blood, human
- Blood, frog
- Bone, L. S. and T. S.
- Tongue, T. S.
- Cerebrum
- Cerebellum
- Stomach, T. S.
- Small Intestine
- Adipose tissue
- Connective tissue
- Heart
- Voluntary muscle, T. S. and L. S.
- Involuntary muscle
- Nerve cells, multipolar
- Nerve fibers, medullated
- Cartilage, hyaline
- Cartilage, yellow elastic
- Spinal Cord, T. S.
- Large intestine
- Scalp, hair shafts and follicles
- Skin, showing sweat glands
- Lung, T. S.
- Liver, T. S.
- Kidney, T. S.
- Retina of eye

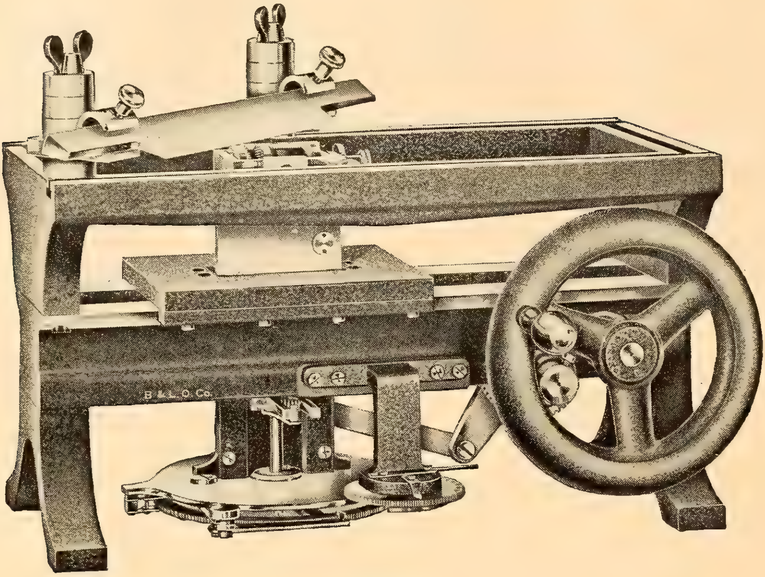
Prepared slides of any specimen are obtainable. The above list has been prepared because of the greater demand of these in colleges and schools.

For the preparation of slides we furnish embedding, sectioning staining and mounting equipment.

SEE

Microtomes, Paraffin Ovens, Staining Dishes, Cabinets, Slides, Cells, Cover Glasses, etc.

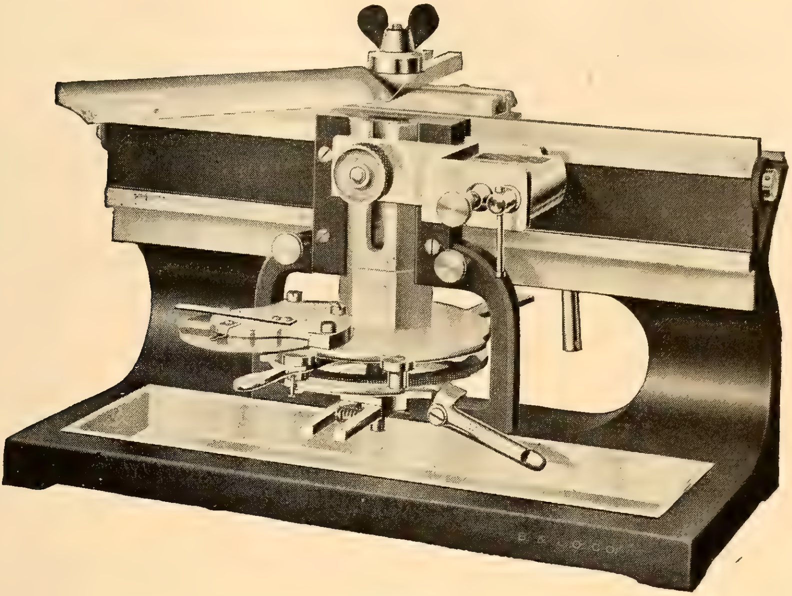
Stains, Staining Solutions, Hardening Fluids, Paraffin, Bioloidin, Celloidin, etc.



14520

Microtomes and Accessories

14520	**Minot Automatic Precision Microtome—Bausch & Lomb.** This mocrotome is designed for the most accurate all around work; it is intended especially for very precise section cutting of large specimens either paraffin or celloidin, but can be used for serial work as well and has given eminent satisfaction in some of the most exacting laboratories in the world; it is especially rigid and has a very long knife stroke, while gear construction eliminates possibility of personal error, insuring a steady stroke and even contact with feeding mechanism; stand consists of heavy rectangular frame, affording unusually stable support for all parts; feeding mechanism operates automatically and provides for cutting sections one micron and more up to 25 microns in steps of single microns, with feed wheel protected by metal cover plate; object holder of strong construction, takes objects measuring 35 x 23 mm, is adjustable vertically to the knife edge by rack and pinion movement, orients in two planes, giving any desired cutting angle, and moves horizontally by means of crank drive with gears, operated by fly wheel and handle; knife support consists of oblong frame, carefully machined, having two knife clamps, allowing five different heights of knife with reference to the object clamp, movable in slots to place knife at any horizontal angle with relation to the object; finished in alcohol proof, crystal black; is 40.5 cm long, 19.4 cm wide and 24.5 cm high; furnished in strong wooden carrying case with handle, but without knife	Each	200.00
14521	**Knife** for above microtome	Each	25.00
	Tilting Knife Clamps	Each	13.50
	Zabriskie Object Clamp, extra	Each	20.00



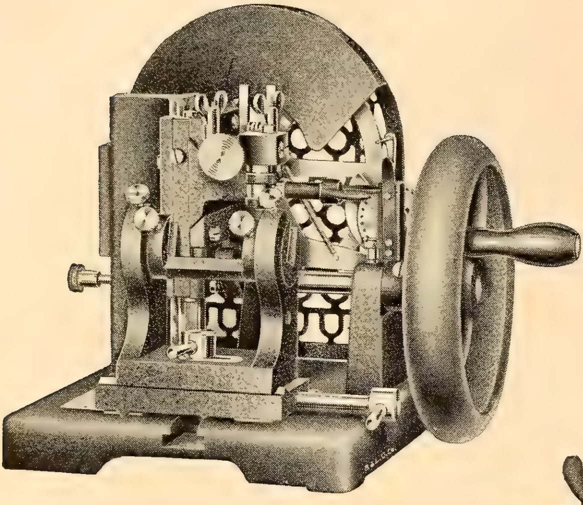
14525

14525 **Microtome, Automatic Laboratory—Bausch & Lomb.** This is an instrument of large proportions, especially designed for all around laboratory work, being efficient for every purpose except the most delicate serial work; the lateral adjustability of the feeding mechanism provides for different cutting angles and stroke lengths; the stand is of solid cast metal of one piece, with rectangular base provided with removable pan; feeding mechanism is operated automatically with stroke and knife by arm extending from rear of knife block and also by hand; it is controlled by adjustable cam with graduated knurled button and spring click giving feed of 2 to 36 microns in steps of two microns; whole feeding mechanism is supported in a metal stirrup adjustable laterally along front of stand and secured in position by clamping screws; object clamp, which is of one piece and extremely rigid, when fully extended will accommodate objects measuring 35 x 32 mm, is adjustable vertically and orienting in one plane, and can be set at either side of the vertical slide for paraffin or celloidin work; knife block, which is triangular in form, slides in carefully ground metal ways; finished in alcohol proof, crystal black; length, 34.4 cm; width, 15.8 cm; height, 21.8 cm; furnished in strong wooden carrying case with handle, without knife..............Each **115.00**

14526 **Knife** for above microtome ....Each **14.00**

BIOLOIDIN

Under this Trade Name we furnish an Imbedding Material for the celloidin method which will give utmost satisfaction. See Imbedding Materials.



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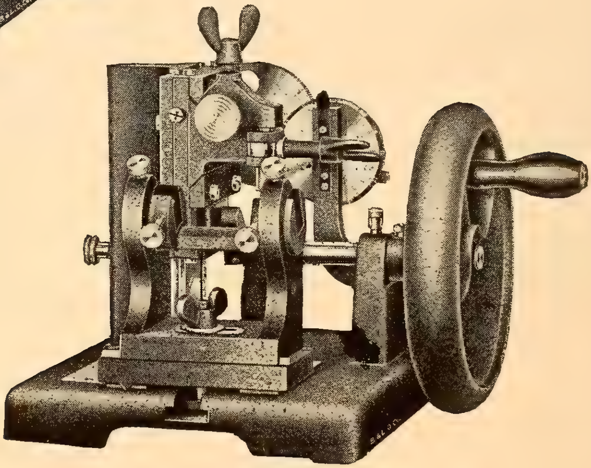
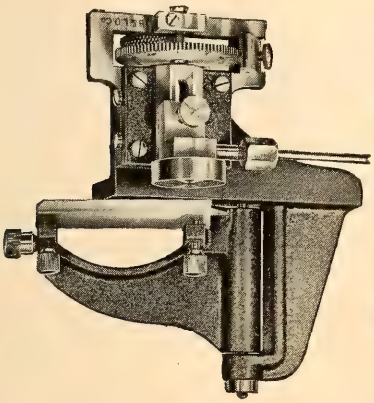


14540

14530	**Minot Automatic Rotary Microtome—Bausch & Lomb.** An ideal microtome for rapid serial work, cutting single micron sections with the greatest accuracy; feeding mechanism operates automatically, giving cuts from 1 to 25 microns in steps of 1 micron; object disc, 25 mm in diameter, in adjustable holder, can be oriented to give any desired cutting angle, the whole moving on a vertical slide and being wheel driven; an object clamp can be used in place of discs; the knife has various adjustments for placing in relation to the object; finished in alcohol-proof, crystal black; is 19.6 cm long, 212 cm wide and 21.4 cm high; furnished in wooden carrying case with handle	Each	132.00
14536	**Knife** for above microtome	Each	9.00
14537	**Object Clamp,** extra	Each	5.50
14538	**Adjustable Knife Holder** for celloidin	Each	14.75
14540	**Minot Simplified Automatic Rotary Microtome—Bausch & Lomb.** A very accurate instrument and yet more simple in construction than the original rotary; feeding mechanism operates automatically, providing for cutting sections of 2.5 microns upwards; setting disc, cam form, has ten steps from 2.5 to 25 microns; object disc, 25 mm in diameter, with ball-bearing in socket holder, can be oriented for any angle and firmly clamped; the knife in holder has various adjustments for placing it in proper relation to the object; finished in alcohol-proof, crystal black; is 19.6 cm long, 21.2 cm wide and 20.8 cm high; supplied with wooden carrying case with handle	Each	82.50
14541	**Knife** for above microtome	Each	9.00
14542	**Object Clamp,** extra	Each	6.00



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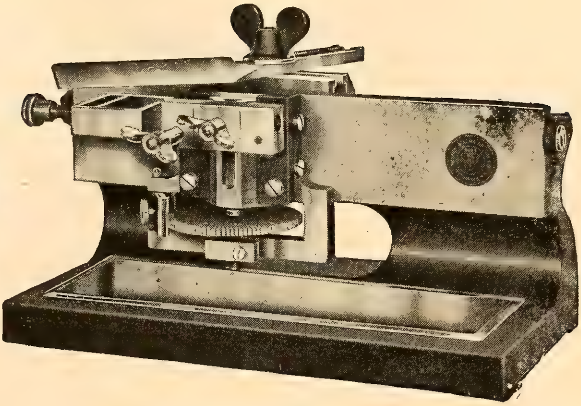

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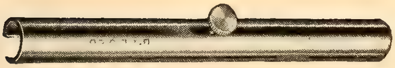
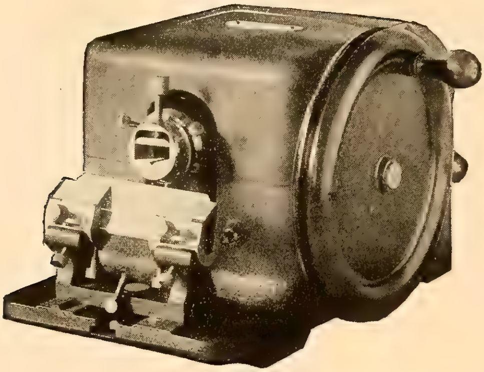


14590

14595

14570-75-85

14545	**Physicians' Microtome—Bausch & Lomb.** This instrument is of unusually simple construction; it cuts rapidly and accurately frozen sections, and section objects embedded in paraffin or celloidin, working in steps of 5 microns; operates by swinging the knife carrying arm back and forth over the object; clamp takes objects up to 30 x 22 mm, and is interchangeable with freezing attachment; furnished with object clamp, but without knife or freezing attachment........Each	27.50
14550	**Clinical Microtome—Bausch & Lomb.** Similar to the above microtome, but with freezing attachment ....Each	34.00
14551	**Knife** for above microtome ....Each	8.00
14552	**Object Clamp** for paraffin work ....Each	7.00
14555	**Microtome, Student Laboratory—Bausch & Lomb.** This instrument is designed for individual and laboratory use where a reliable mechanical microtome, moderate in price is required. It is of comparitively simple construction but very accurate. The feeding mechanism, operated by hand, provides for cutting sections 5 microns or more in steps of 5 microns. Object clamp of one piece, when fully extended takes objects measuring 30 x 22 mm and orients in one plane. Dimensions 24 cm long, 12.7 cm wide and 14.6 cm high and supplied in a strong wooden carrying case with handle, without knife....Each	35.00
14556	**Knife** for above Microtome ....Each	9.50
	Plain Microtome Knives—Bausch & Lomb. Each has a plain, straight blade, heavy and well ground; furnished in two sizes in a velvet lined case.	
14570	With 90 mm blade, without handle ....Each	8.00
14575	With 125 mm blade, without handle ....Each	9.00
14585	**Handle**—For use in sharpening knives listed above ....Each	2.25
14590	**Spring Back**—For honing ....Each	1.75
14595	**Safety Razor Holder.** Designed for use with the Rotary Microtomes. It holds rigidly any safety razor blade of the wafer type......Each	6.75



14600

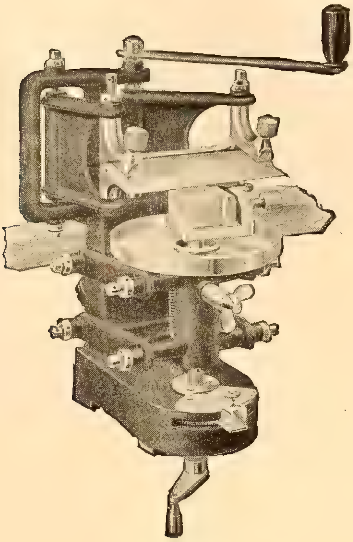
Rotary Microtome. This microtome, designed along entirely new lines, is offered for the most accurate and careful work. An inclined plane feed attachment, which is absolutely independent of the up and down movement of the perpendicular support overcomes many of the inaccuracies inherent in other types. The feed is arranged for cutting sections from 1 micron to 60 microns by turning the knurled button at the back of the case. The total excursion of the feed is 37 mm, making it ideal for large series. The object can be easily and accurately oriented at any desired angle, the stroke being 2 inches, which permits of the cutting of large sections and gives a long stroke for celloidin work. (An adjustable knife support, the holder of which orients through 55° can be provided especially for celloidin work if desired.) The knife is fastened by two clamps, is perfectly rigid and may be turned at any angle. The feeding mechanism is covered, protecting the working parts from dust; the cover being hinged to base so that all parts may be conveniently inspected. Finished in dull black alcohol-proof enamel with small parts heavily nickeled, in case.

14600	New Rotary Microtome with one knife, handle and back for sharpening, and with three object discs	Each	**180.00**
14601	Knife holder for celloidin sections, extra	Each	**20.00**
14602	Adjustable knife holder	Each	**15.00**
14603	Knife for paraffin sections, extra	Each	**9.50**
14604	Knife for celloidin sections, extra	Each	**9.50**

Rotary Microtome. Same as No. 14600, but operated by an electric motor which is belted to the grooved balance wheel. Microtome is mounted on a table 38 in. long and 26 in. wide the top of which is of dull black finish uneffected by alcohol or other reagents. Above with motor and speed regulator **but without** microtome.

14605	For 110 volt direct current	Each	**100.00**
14607	For 220 volt direct current	Each	**125.00**

We furnish Paraffin of any particular melting point.



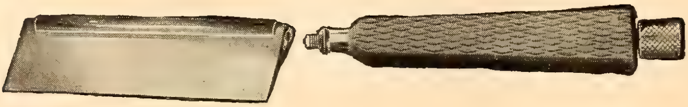
14610

Automatic Laboratory Microtome. A very desirable and accurate instrument for work with frozen sections and celloidin, as the blade describes the flattened curve corresponding to the double movement in free hand sectioning. By the method of holding the knife by arms which are not parallel the entire length of the cutting edge is utilized, permitting the cutting of larger sections and giving uniform wear on the knife. The instrument is fitted with double unit bearings to take up lost moton and the whole feed mechanism, simple in construction, is protected from dust and drippings by the extended base of the main frame. The drip pan at the top of socket in which the object clamp sets may be quickly removed for frozen section work. Handsomely finished in crystal black and nickel plate, in case.

14610	Automatic Laboratory Microtome complete, with one knife and usual object clamp for paraffin or celloidin in packing case__________Each	**85.00**
14612	Usual object clamp for paraffin or celloidin, if ordered sepatately__Each	**3.00**
14614	Automatic Laboratory Microtome No. 14610, with one knife, object clamp, and fitted with No. 14616 freezing attachment for CO_2______	**94.00**
14616	**Freezing Attachment for CO_2.** For use with Automatic Laboratory Microtome No. 14610. Contains hard rubber insulating ring between the corrugated plates and the rest of the apparatus. Fits in same socket as object clamp. Complete with copper tube connections__Each	**13.50**

KNIFE SHARPENING

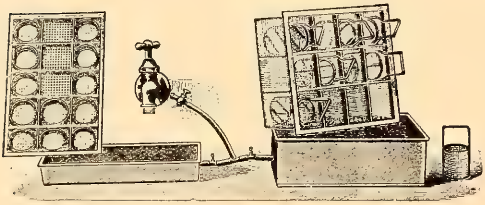
When your Microtome Knife needs resharpening, ship it to us and we will sharpen it for you at a reasonable charge.



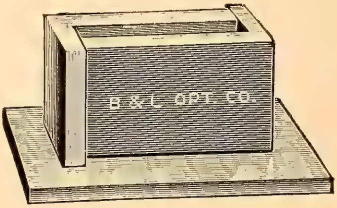
14618	110 mm; no handle, for use with No. 14610	Each	8.00
14619	120 mm; no handle, for use with No. 14600	Each	9.50
14620	*120 mm; no handle, for use with No. 14600	Each	9.50
14621	185 mm; no handle, for use with No. 14600	Each	14.50
14622	250 mm; no handle, for use with No. 14600	Each	20.00

* Ground for celloidin.

14624	**Handle** for sharpening above knives	Each	2.25
14626	**Back** for sharpening above knives	Each	1.75



14645



14650

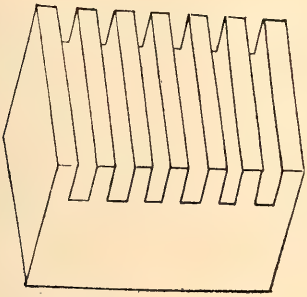
14630 **Hones—Blue Green.**

No.	A	B	C	D	E
Size, mm	125 x 65	150 x 30	180 x 40	210 x 45	260 x 50
Each	1.10	1.20	1.40	1.60	2.10

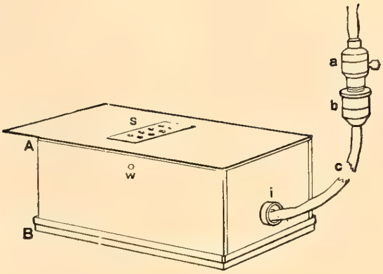
14635	**Strops.** Mounted on block, fine	Each	3.00
14640	**Strops.** Mounted on block, coarse	Each	3.00
14645	**Boxes—Washing.** For tissues fixed in a liquid containing mercuric chlorid; of metal; have perforated inner trays, deep or shallow, to accommodate various sized pieces, fitting in the two boxes; small stop cock can be inserted in usual water faucet so that a small stream can be drawn without interfering with large faucet	Each	30.00

14650 **Embedding Boxes.** For use in embedding objects in paraffin; consists of two metal L's with metal plate; various sized objects may be embedded by placing L's in different positions.

No.	A	B	C
Height, mm	10	20	30
Each	.75	.75	.75



14655



14660

14655 **Fiber Blocks.** For holding specimens for sectioning; grooved.

No.	A	B	C	D	E	F	G
Height, in.	½	¾	¾	¾	¾	¾	1
Length, in.	1¼	½	⅝	¾	⅞	1	1½
Width, in.	⅞	½	⅝	¾	⅞	1	1½
Per 100	6.50	3.50	4.00	5.00	6.00	7.50	9.00

14660 **Infiltrating Box and Spreading Plate.** Consists of metal spreading plate on top, porcelain receptacle, base or tray holding infiltrating dishes and beaker for melted paraffin........................Each **17.50**

14665 **Liquid Carbon Dioxide.** 20 lbs. in steel cylinder, with wall straps and wrench ....Each **35.00**

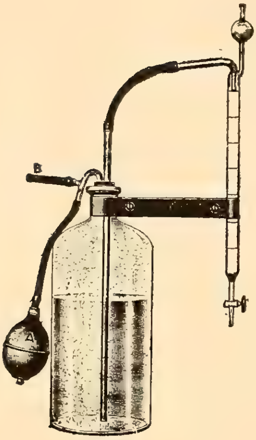
HISTOLOGICAL MATERIALS

Our stock incudes all materials and equipment used in histological, biological and zoological preserving processes.

Fixing and Hardening Fluids
Alcohols, Xylol, Balsams
Stains and Counterstains

Paraffins of any desired melting points
Bioloidin—the perfect Celloidin
Cover Glass Cements

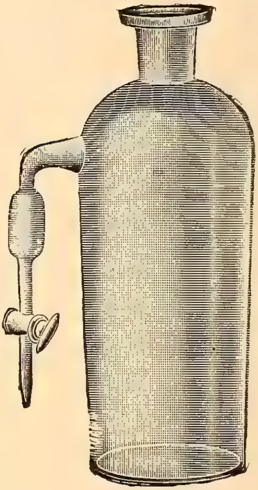
Materials such as Slide Cabinets, Baths, Staining Dishes, Slides, Cells, Cover Glasses are available in complete assortments.



14685

14700

14695



14705

14690

Milk Testing Apparatus

14685 **Acid Bottle—Automatic.** For sulphuric acid; is self-adjusting and requires no tipping; burette contains enough from one filling for 6 charges of acid; glass parts are connected with acid resisting rubber tubing; all parts can be easily replaced at small cost; burettes are graduated into 6 charges each of 8.8 cc, 9 cc or 17.5 cc and will be supplied in any one requested; bottle holds about 9 pints____Each 5.40

14690 **Acid Dippers.**

No.	A	B
Capacity, cc	8.8	17.5
Each	.30	.30
Per dozen	3.35	3.35

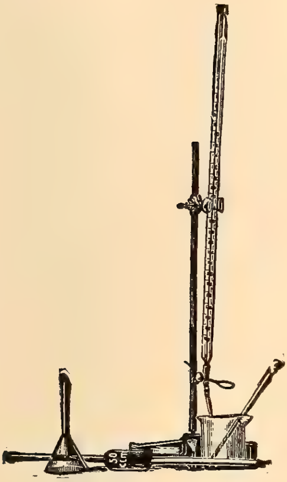
14695 **Acid Funnels.** For filling milk and cream test bottles with acid__Each .12

Per dozen	1.15
Per gross	11.20

14700 **Acid Measures.**

No.	A	B	C	D	E	F
Capacity, cc	2	8	8.8	9	17.5	25
Each	.15	.15	.15	.15	.15	.15
Per dozen	1.15	1.15	1.15	1.15	1.15	1.15

14705 **Acid Measure, Combined.** With 17.5 cc pipette with stopcock____Each 6.00



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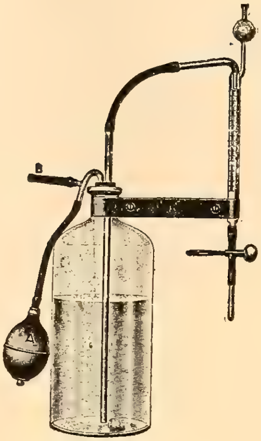
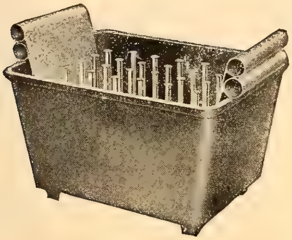


14715 and 25

FAULTLESS STIRRING ROD FOR SALT TEST

14720 and 28



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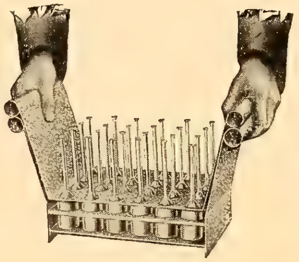
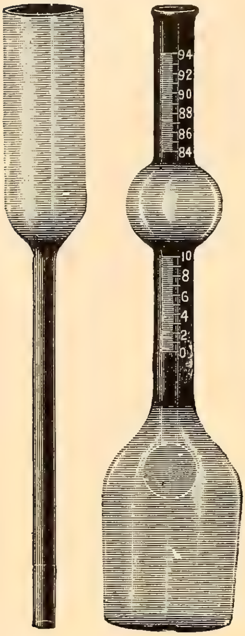


14732

14710	**Acid Test Apparatus—Mann's.** Provides chemical means for ascertaining extent of development of lactic fermentation in the ripening of cream, also in cheese making; can be successfully used to ascertain the time to add the rennet; outfit consists of burette stand and clamp, 50 cc burette with pinchcock, 50 cc pipette, 4-oz. beaker glass, stirring rod and long stem funnel -- Each	6.75
14715	**Acidity Testing Apparatus—Self-Adjusting, Automatic.** Is very easy to operate and gives correct results; for testing the acidity of milk, cream or whey; outfit includes pipette (9 cc), glass beaker, stirring rod, bottle of neutralizer in dry form, sufficient for making ½ gal. of solution, and 3 oz. bottle of indicator; proper arrangement of apparatus for making test is shown in illustration ---------------- Each	6.00
11720	**Rods—Stirring.** For acidity test; contain color sample should have when test is finished -- Each	.30
14725	**Apparatus for Salt Test—Self-Adjusting, Automatic.** Similar in form to No. 14715 above; instantly adjusts itself to zero after test; gives accurate results, with small chance for error; furnished complete for use -- Each	7.50
14728	**Rods—Stirring.** For salt test -- Each	.30
14730	**Bath—Hot Water.** Designed to comply with state regulations for Babcock testing; heavy, galvanized iron casting, with steel inlet and overflow; will accommodate 24-bottle shaking rack; size, 13½ x 10½ x 7¾ in. -- Each	7.50
14732	**Shaking Rack.** Designed to comply with state regulations for Babcock testing; to be used in connection with hot water bath; is in two pieces, between which test bottles are securely held; 24 bottles can be shaken at a time as quickly as one bottle---------------- Each	3.50



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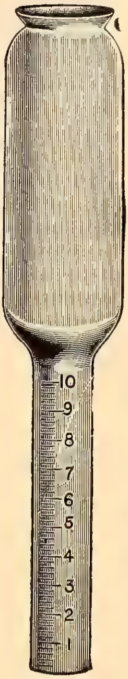

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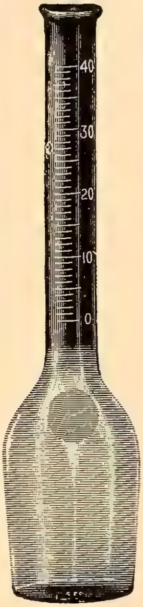

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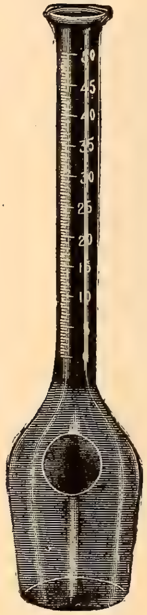


14765-70-75

14745 **Bottles**—Butter Test. Of best quality; guaranteed accurate; 9 in. long; graduated to 100% into 1% ---------------------- Per dozen 4.65
Per gross 46.50

14750 **Bottles—Butter Test—Wright's.** For determining the amount of moisture and over-run in butter; graduated to 1/5%; complete with funnel -- Per dozen 5.80
Per gross 57.80

14755 **Bottle—Casein—Hart's.** For estimating amount of casein in milk; for use in any Babcock Milk Tester; graduated -------------------- Each .25

14760 **Bottles—Cream Test.** Of best quality; guaranteed accurate; 6-in. size, 18-gram.

No.	A	B	C	D	E	F
Capacity, %	20	25	30	35	40	40
Graduated into, %	1/5	1/5	1/2	1	1/2	1
Per dozen	**3.70**	**3.70**	**3.70**	**3.80**	**3.80**	**3.80**
Per gross	**37.00**	**37.00**	**37.00**	**38.00**	**38.00**	**38.00**

No.	G	H	I	J	K
Capacity, %	45	45	50	50	60
Graduated into, %	1/2	1	1/2	1	1/2
Per dozen	**3.80**	**3.80**	**3.80**	**3.80**	**3.80**
Per gross	**38.00**	**38.00**	**38.00**	**38.00**	**38.00**

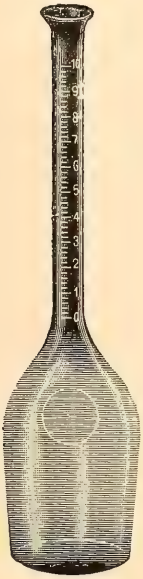
14765 **Bottles—Cream Test.** Of best quality; guaranteed accurate; size, 6-in., 9-gram.

No.	A	B	C
Capacity, %	30	40	50
Graduated into, %	½	½	½
Per dozen	**3.90**	**3.90**	**3.90**
Per gross	**39.00**	**39.00**	**39.00**

14770 **Bottles—Cream Test.** Of best quality; guaranteed accurate; size, 9-in., 18-gram.

No.	A	B	C	D	E
Capacity, %	30	40	50	55	60
Graduated into, %	1/5	1/2	1/2	1/2	1/2
Per dozen	**3.90**	**3.90**	**3.90**	**3.90**	**3.90**
Per gross	**39.00**	**39.00**	**39.00**	**39.00**	**39.00**

14780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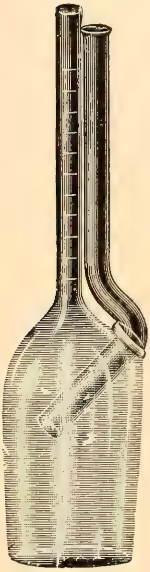
14800


14805

14775 **Bottles—Cream Test.** Of best quality; guaranteed accurate; size, 9-in., 9-gram.

No.	A	B	C
Capacity, %	30	40	50
Graduated into, %	1/2	1/2	1/2
Per dozen	**3.90**	**3.90**	**3.90**
Per gross	**39.00**	**39.00**	**39.00**

14780 **Bottles—Cream Test—Standard.** According to Bureau of Standards specifications and adopted by Official Dairy Instructors' Association; size, 6-in., 9-gram; 50% ---------------------------------Per dozen **4.55**
Per gross **45.50**

14785 **Bottles—Cream Test—Standard.** According to Bureau of Standards specifications and adopted by Official Dairy Instructors' Association; size, 9-in., 9-gram; 50% ---------------------------------Per dozen **4.75**
Per gross **47.50**

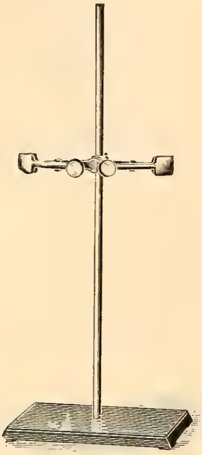
14790 **Bottles—Milk Test.** Of best quality; guaranteed accurate; 9-in. size, 18-gram; capacity, 10%; graduated in 1/5% --------------Per dozen **3.80**
Per gross **38.00**

14795 **Bottles—Milk Test.** Of best quality; guaranteed accurate; 6-in. size, 18-gram.

No.	A	B	C	D
Capacity, %	5	6	8	10
Graduated into, %	1/10	1/10	1/10	1/5
Per dozen	**3.30**	**3.30**	**3.50**	**3.70**
Per gross	**33.20**	**33.20**	**35.50**	**37.00**

14300 **Bottles—Milk Test—Standard.** According to Bureau of Standards specifications and adopted by Official Dairy Instructors' Association; size, 6-in., 18-gram; 8% ---------------------------------Per dozen **4.10**
Per gross **41.00**

14805 **Bottles—Skim Milk Test.** Used by majority of dairy schools, commissioners, separator manufacturers and many others to whom closeness in skimming is of prime importance; graduated from 50/100%, in 1% ---Per dozen **8.50**
Per gross **85.50**



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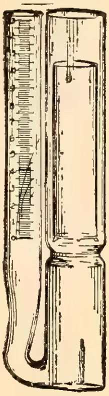

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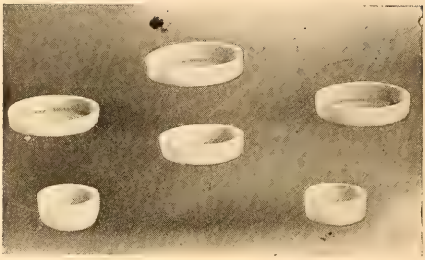


14831

14825

14830

14810

14810 **Burettes—Acid.**

No.	A	B	C	D	E
Capacity, cc	17.5	17.5	17.5	17.5	18
No. of charges	3	6	12	25	25
Each	**2.00**	**2.00**	**2.50**	**3.00**	**3.00**

14815 **Burettes, Mohr's.** With Geissler's straight stopcock, well ground. Accurately graduated to 50 cc in 1/10th cc------------------------Each **1.90**

14820 **Burette Support.** Consisting of heavy iron base with rod and fitted with double metal clamp to accommodate two burettes--------Each **2.00**

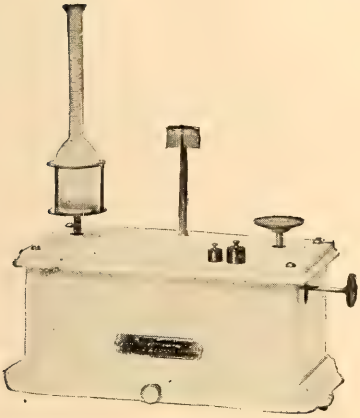
14825 **Butter Boat.** Used for weighing samples of butter, cheese, etc.; nickel-plated; length, 3½ in.; width, 7/16 in.; depth, ¼ in.------------Each **.25**
Per Doz. **2.40**

14830 **Butter Color Rods—Standard.** Are hollow glass tubes about the size of a pencil, closed at each end, with four shades of yellow with which butter can be matched to get correct shade for various markets; are most accurate when finished butter is at a temperature of about 40° or 50°F; should be kept in their original containers when not in use, for protection against light and breakage--------------Each **.60**

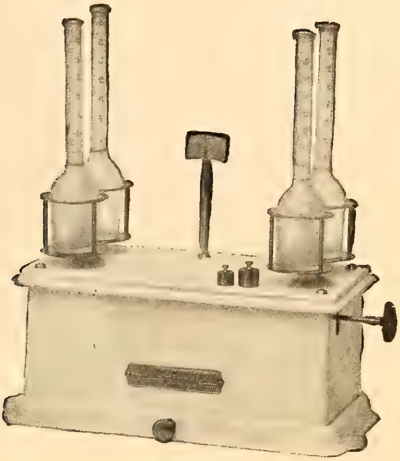
14831 **Capsules—Vitreosil, Glazed.** Are entirely resistant to acids and will withstand rapid changes of temperature without cracking or breaking; are light and do not alter in weight; much less expensive than platinum.

No.	A	B	C	D	E	F
Approx. capacity, cc	10	15	20	30	35	40
Diam. inside, mm	35	44	51	57	60	70
Depth in center inside, mm	13	13	13	13	13	16
Each	**.75**	**.75**	**1.13**	**1.13**	**1.25**	**1.56**

14832 **Catalase Apparatus,** for the determination of the relative amount of catalase in milk. Simple and relatively accurate. Has measuring arm graduated from 0 to 13 cc in 1/10 cc divisions and tube for holding sample. Complete with one hole rubber stopper and glass rod to close hole in stopper --Each **4.00**



14840-A



14840-C

14840 **Cream Test Balances.** White-enameled; 8-milligram sensitiveness (⅛ grain); dimensions: 10 x 5½ x 9 in.; complete, with one 9-gram and one 18-gram weight.

No.	A	B	C	D
Capacity, bottles	1	2	4	12
Each	$25.00	27.00	29.00	35.00

14850

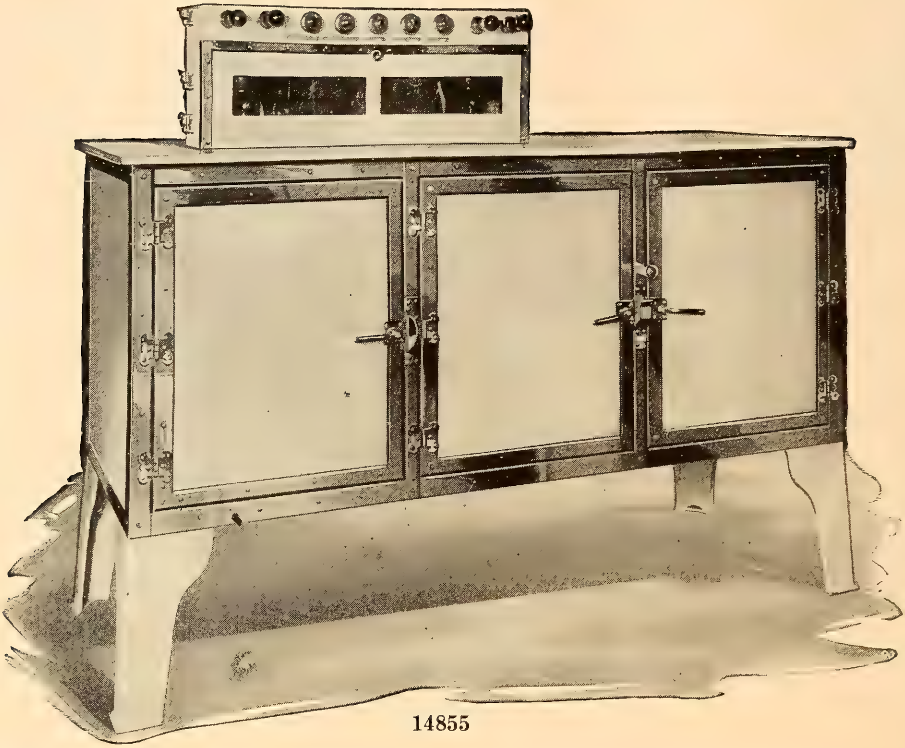
14850 **Counterpoises—Adjustable.** For use with dishes, flasks or beakers that are to be used more than once in weighing operations; by adding proper weight of powdered lead, counterpoises can be made to weigh very nearly the same as the empty dishes against which it is being counterpoised, making it possible to disregard its weight in figuring weight of empty vessel.

No.	A	B	C	D
Approx. minimum weight, grams	5	16½	28	74
Approx. maximum weight, grams	17	30	75	110
Each	.50	.60	.60	1.10
Per. doz.	5.40	6.00	6.00	10.80

14851 **Powdered Lead.** For counterpoising........................Per pound .50

ANALYTICAL BALANCES

For accurate weighings to determine milk solids gravimetrically a complete line af analytical balances is offered. See page 29.



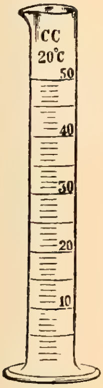
14855

14855 Culture Controller. Makes possible both Lactic and Bulgaricus cultures for manufacture of commercial buttermilk, cheese, cottage cheese, and butter; incubates Bacilli Bulgaricus in first chamber at 97½°F; incubates Bacilli Lactici Acidi cultures in second chamber at temperature of 68°F; thermostat controls temperatures; has third compartment for ice, which can be used as refrigerator; air is circulated through all parts of chamber by electric fan, giving uniform temperature; walls are of two thicknesses of insulating material, with air space between; inside lined with heavy tinned copper, outside with vitrified porcelain enamel and nickel-plated trimmings; for direct current. **Voltage must be specified when ordering.**

No.	A	B	C	D	E	F
No. compartments	3	2	1	3	2	1
Height, inside, in.	13	13	13	19	19	19
Width, inside, in.	15	15	15	21	21	21
Depth, inside, in.	15	15	15	24	24	24
Shelf space, square in.	225	225	225	504	504	504
Floor space, in.	62½ x 22½	43 x 22½	22½ x 22½	81 x 32	54 x 32	32 x 32
Height to table top, in.	43	43	43	49	49	49
Height to top, extreme, inches	58	58	58	64	64	64
Each	**900.00**	**600.00**	**350.00**	**990.00**	**700.00**	**400.00**

14860 Culture Controller. Same as No. 14855 above, but for alternating current. **Voltage and cycles must be specified when ordering.**

No.	A	B	C	D	E	F
No. compartments	3	2	1	3	2	1
Height, inside, in.	13	13	13	19	19	19
Width, inside, in.	15	15	15	21	21	21
Depth, inside, in.	15	15	15	24	24	24
Shelf space, square in.	225	225	225	504	504	504
Floor space, in.	62½ x 22½	43 x 22½	22½ x 22½	81 x 32	54 x 32	32 x 32
Height to table top, in.	43	43	43	49	49	49
Height to top, extreme, inches	58	58	58	64	64	64
Each	**950.00**	**650.00**	**400.00**	**1040.00**	**750.00**	**450.00**



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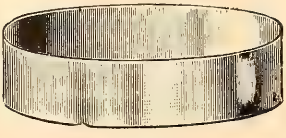

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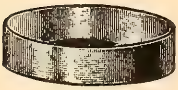

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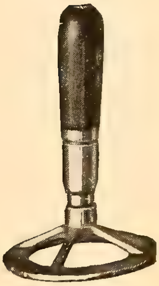

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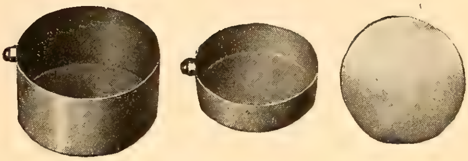


14880-85-90

14865 **Cylinders—Graduated.** With single graduations and lip; on foot; capacity, 100 cc; graduated in 1 cc .... Each .55

14870 **Cylinder—Graduated.** Same as No. 14865 above, but with double graduations, up and down .... Each .70

14875 **Dishes—Aluminum.** For milk analysis.

No.	A	B	C	D	E
Diameter, mm	50	65	75	90	100
Height, mm	13	15	18	21	25
Each	.20	.25	.35	.45	.55

14880 **Dishes—Aluminum.** May be used for moisture determination of practically any liquid or solid; have a patented ear which permits counterpoising of each dish so that any number of dishes, up to 100, will have the same weight, thus making it possible to use but one counterpoise.

No.	A	B	C	D	E
Diameter, inches	2	2½	2¾	3	3½
Height, inches	½	⅝	¾	1	2
Each	.25	.30	.35	.40	.50
Per dozen	2.40	3.00	3.60	4.20	5.40

14885 **Dishes—Aluminum.** Same as No. 14880 above, but each counterpoised and numbered.

No.	A	B	C	D	E
Diameter, inches	2	2½	2¾	3	3½
Height, inches	½	⅝	¾	1	2
Each	.75	.90	.95	1.00	1.10
Per dozen	9.00	9.60	10.20	10.80	12.00

14890 **Dish Cover—Aluminum.** Of thin aluminum, convex-concave; for covering aluminum dishes while weighing .... Each .25

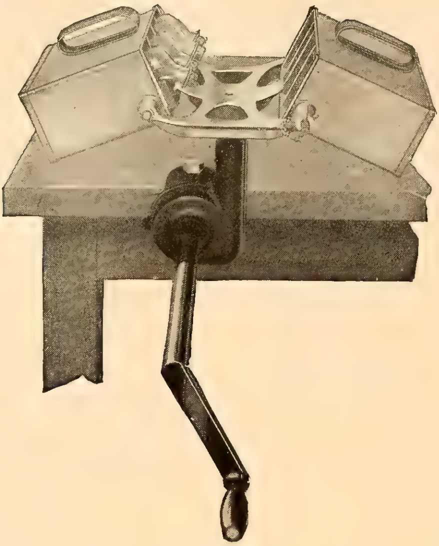
14895 **Dish—Contact Maker.** Intended to aid rapid evaporation of moisture; has lower ring that fits over top of dish, permitting operator to firmly press dish upon hot electric plate; base is of nickel-plated brass, handle of black enameled wood; height, 6½ in.; outside diameter, 3⅝ in. .... Each 1.25

5765 **Dishes—Evaporating.** Ohio porcelain, flat bottom, for milk evaporation.

Size No.	A	B	C
Diameter, mm	40	43	72
Height, mm	7	11	16
Each	.10	.20	.45

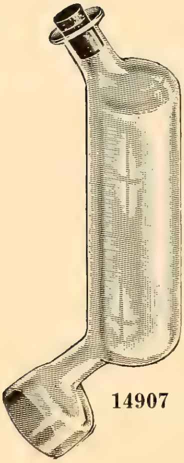
14900 **Divider.** Used to facilitate reading of the test and to eliminate liability of errors .... Each .75

14912

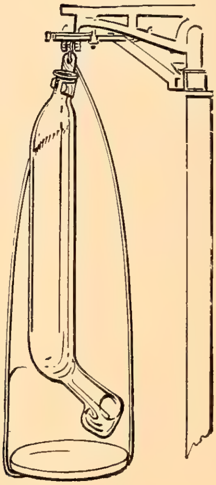


14905

14909



14907

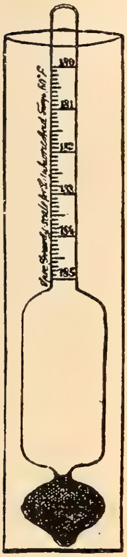


14905 **Extraction Centrifuge.** For No. 14907 fat extraction flasks; accommodates eight fat extraction flasks; can be attached directly to laboratory table; affects rising of ether extract and abolishes necessity of filtering; has special aluminum head to receive the two flask holders, which can be quickly attached; height from table, 9 in.; extreme diameter, 21 in.; furnished complete with head and two flask holders -- Each 14.50

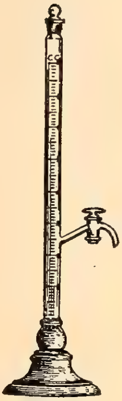
14907 **Extraction Flask.** Suitable for making wet ether extractions for determining butter fat in dairy products, and for determining fat in meats, leather, feed stuffs, etc.; it can be centrifuged; length over all, 6¾ in.; width over all, 1⅝ in.; capacity of bottom chamber, 23 cc; capacity of top chamber, 86½ cc ---------------------------------- Each 2.50
Per dozen 27.00

14909 **Extraction Flask Hanger.** For suspending flask No. 14910 under beam of balance while weighing; insures absolutely correct results; made of nickel-plated brass ------------------------------------ Each .25

14912 **Extraction Flask Holder.** Made of heavy nickel-plated copper, reinforced at top and bottom; makes possible the handling of four extraction flasks No. 14910 at once, while shaking, centrifuging or adding the reagents; used in set of two while centrifuging; height, 6 in.; length, 6½ in.; furnished complete, with handle and side holes for fitting centrifuge -- Each 3.00



14940



14914

BAUSCH & LOMB OPT. CO.

2310

14950

14955

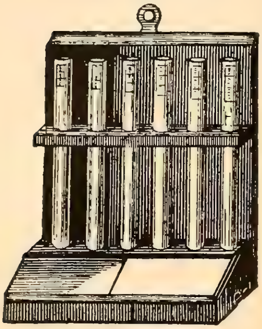
14960

14914	**Extraction Tube—Roehrig's.** For use in determining fat in milk and dairy products by Roese—Gottlieb official method of Association of Official Agricultural Chemists; graduated to 80 cc in 1 cc divisions, with side-tube and stopcock for withdrawal of solvent; complete, with ground-glass stopper, on wooden base .... Each	5.00
14915	**Guide Plate.** For milk smears. Measures 2 x 4½ in.; has 16 square cm areas, placed in two rows as illustrated, remainder of plate being etched by sand blast; these areas are used as guide plates, being placed under slide on which smears are to be mounted when in use .... Each	.60
14920	**Hand Tally Register—Benton's.** Very convenient aid for counting bacteria in milk smears, or for counting colonies on Petri plates .... Each	3.25
4090	**Hydrometer—Milk.** With Baumé scale; scale, 0 to 120°; divisions, 1°; commercial quality; length, about 10½ in. .... Each	.50
4094	**Hydrometer—Milk.** As adopted by the New York Dairy Commission; scale, 60 to 120° in 1° divisions; length, about 5 in. .... Each	1.00
4095	**Hydrometer—Milk.** As adopted by the N. Y. Dairy Commission; scale, 0 to 120°; divisions, 2°; standard quality; length, about 10 in. .... Each	1.50
4100	**Hydrometer—Milk.** Same as No. 4095 above, but with thermometer .... Each	3.00
14940	**Hydrometer—Sulphuric Acid.** Intended for use in determining strength of sulphuric acid used in connection with Babcock test; too strong acid will char sample; too weak will cause casein to remain undissolved .... Each	1.50

2310 **Hydrometer Cylinders.** Of heavy glass with lip.

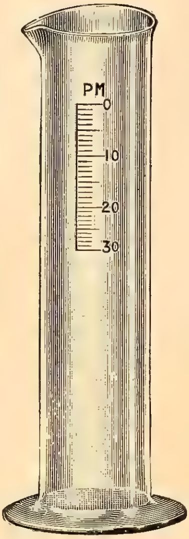
Height, inches	6	8½	10	10½	12	12	12½	14	14½
Diam., inches	1½	1½	1½	1¾	1½	2	2½	2	2½
Each	.46	.52	.55	.58	.68	.68	.80	.78	.92

14950	**Creamometer.** Single tube .... Each	.60
14955	**Creamometer—Chevalier's.** For measuring percentage of cream in milk; without stopcock .... Each	1.00
14060	**Creamometer—Chevalier's.** With glass stopcock .... Each	3.00



14965

15020



14970

14985

15005

14965 **Creamometer.** To show percentage of cream formed on milk; consists of six graduated glass tubes, supported on wooden stand__Each 3.50

14970 **Cylinders.** Creamometer jars.

No.	A	B
Graduated to	0–30	0–90
Each	.52	.56

14975 **Lactobutyrometer—Caldwell's.** For determining amount of fat in milk; consists of graduated tube with rubber stopper, two volume pipettes and one cylinder jar________Each 2.50

14980 **Lactobutyrometer—Marchand's.** For fat determination; complete with pipette ________ Each 1.50

14985 **Lactoscope—Feser's.** For determining amount of fat in milk by its degree of translucency; complete in polished wooden case, with graduated pipette and directions for use________Each 5.00

14990 **Lactometer—Board of Health**________Each 1.25

14995 **Lactometer—Board of Health.** With thermometer________Each 3.25

15000 **Lactometer—New Design.** For direct reading, showing proportion of water in both whole milk and skim milk; small size; length, 165 mm ________Each .75

15005 **Lactometer—Quevenne's.** Small size, 165 mm long________Each 1.25

15010 **Lactometer—Quevenne's.** Large size, 210 mm long________Each 1.25

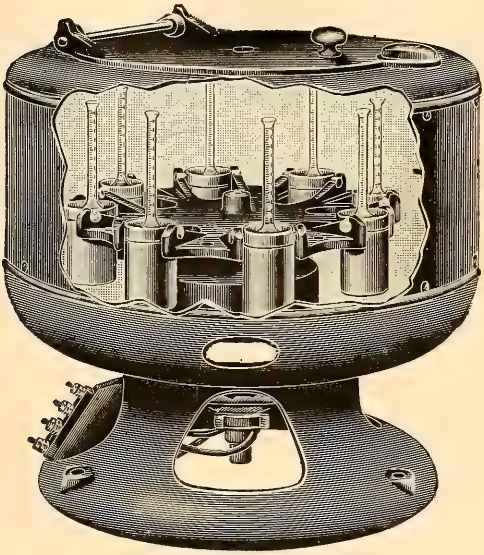
15015 **Lactometer—Quevenne's.** With thermometer________Each 5.00

15020 **Jar, Waste.** Of acid proof stoneware, for waste sulfuric acid. Fitted with two handles and cover.

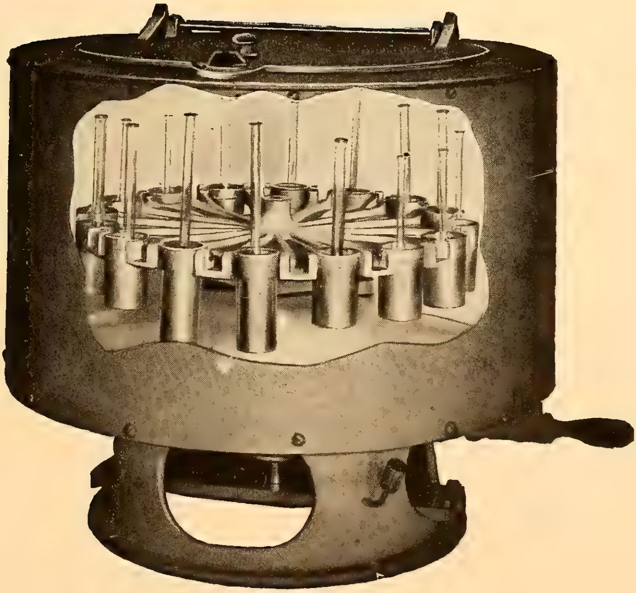
Capacity, gals.	½	1	2
Each	.75	1.00	1.50

15025 **Microscope Slide.** For Breed method of milk smears. Measures 2 x 4½ in.; margins etched by sand blast to width of ¼ in., to permit labeling with pencil________Each .60

15030 **Micrometer Disc.** For examination of milk smears. Designed for use in 6.4x eyepiece; marked with diamond, showing circle 8 mm in diameter, with cross-hairs dividing it into quadrants________Each 3.50



15055



15060

15055 **Milk Testers—Babcock Centrifuge, Electric.** 8-bottle size; powerful machines of sufficient capacity for many testing laboratories, but at the same time compact head and cups are featured by durability, strength, simplicity and convenience of manipulation; accommodates standard 6-inch Babcock test bottles; height, closed, 18 in.; open, 28 in.; diameter, 17 in.; shipping weight, about 160 lbs.

Current	110 V., D.C.	110 V., A.C., 60 Cycles
Each	**105.95**	**109.85**
Current	220 V., D.C.	220 V., A.C., 60 Cycles
Each	**109.85**	**113.75**

15056 **Electric Heater,** extra--Each **15.60**

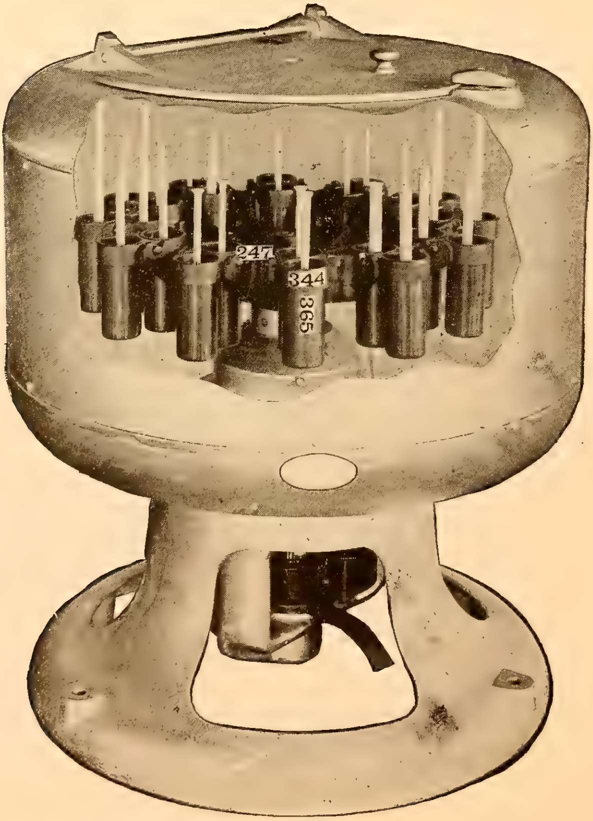
(Please state Current and Voltage when ordering)

15060 **Milk Testers—Babcock Centrifuge, Electric.** 16-bottle size; very massive, rigid machines of high power and sufficient capacity for most testing laboratories; cups regularly furnished with machine carry all usual styles of 6-in. Babcock test bottles; 9-in. cream test bottles may also be used, a longer cup with trunnion ring being furnished for them special; height, closed, 23 in.; open, 35 in.; diameter, 24 in.; shipping weight, about 300 lbs.

Current	110 V., D.C.	110 V., A.C., 60 Cycles
Each	**117.00**	**149.50**
Current	220 V., D.C.	220 V., A.C., 60 Cycles
Each	**117.00**	**149.50**

15061 **Electric Heater,** extra--Each **16.90**

(Please state Current and Voltage when ordering)



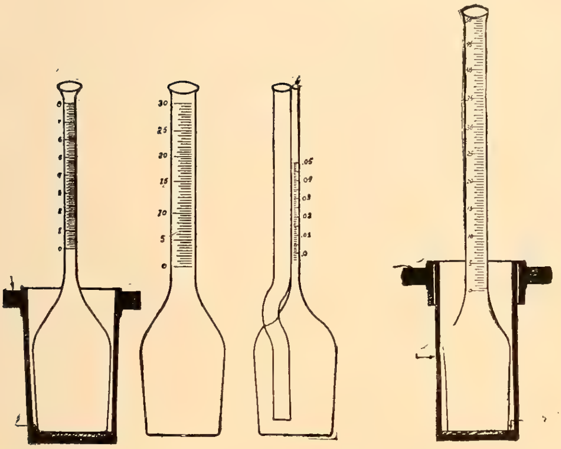
15065

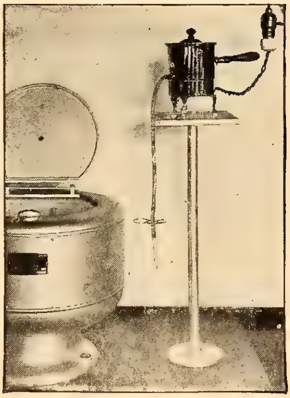
15065 **Milk Testers—Babcock Centrifuge, Electric.** 24-bottle size; modified form of Centrifuge No. 15060, having 12-place head, which carries double trunnion rings and buckets for all styles of Babcock test bottles; accommodates 6-in. and 9-in. standard test bottles; height, closed, 28 in.; open, 40 in.; diameter, 24 in.; shipping weight, about 450 lbs.

Current	110 V., D.C.	110 V., A.C., 60 Cycles
Each	227.50	227.50
Current	220 V., D.C.	220 V., A.C., 60 Cycles
Each	227.50	227.50

15066 **Electric Heater,** extra .... Each 16.90

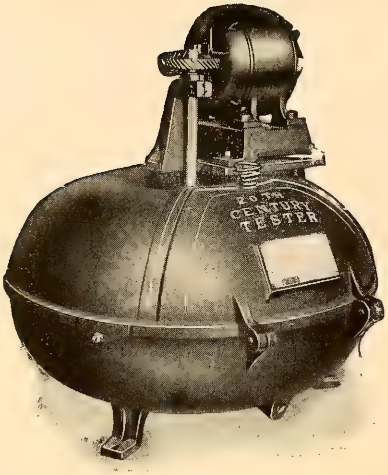
(Please state Current and Voltage when ordering)



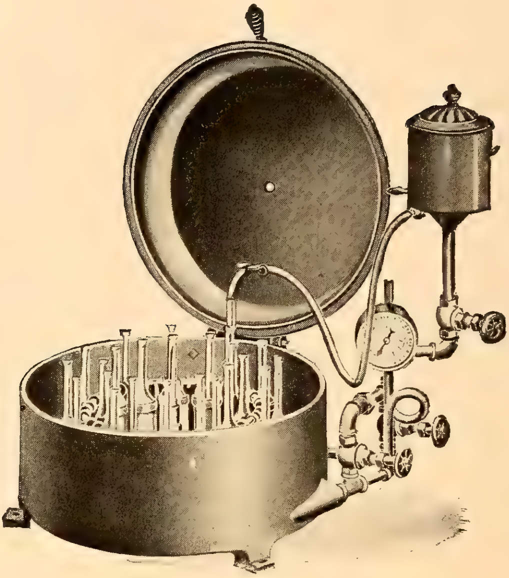


15070 **Milk Testers—Accessory Equipment for Babcock Centrifuges, Electric.**

365	Long metal cups for 9″ Babcock bottles,	Each	.97
366	Trunnion rings for Babcock cups No. 365	Each	.52
620	Babcock milk test bottles, 8%, 1/10% divisions, Massachusetts tested	Per dozen	3.12
621	Babcock milk test bottles, 10%, 1/5% divisions, Massachusetts tested	Per dozen	3.12
630	Babcock cream test bottles, 6″, 30%, ½% divisions, Massachusetts tested	Per dozen	3.12
635	Babcock cream test bottles, 9″, 30%, 1/5% divisions, Massachusetts tested	Per dozen	4.68
640	Babcock skim-milk test bottles, 1/5%, 5/100% divisions, Massachusetts tested	Per dozen	8.58
	Other styles Babcock test bottles quoted on request.		
650	Milk pipettes, 17.6 cc, Massachusetts tested	Per dozen	3.12
655	Cream pipettes, 18 cc, Massachusetts tested	Per dozen	3.12
723	Pillar stand for Electric Hot Water Cup No. 724	Each	1.56
724	Electric Hot Water Cup for use with Babcock Centrifuges	Each	10.40



15075



15078

15075 **Milk Testers—Babcock, 20th Century.** Furnished with electric motor drive in all sizes and in either double-pocket styles or new single-pocket machines, either painted or porcelain-enamel finish; either alternating or direct current motors can be furnished; designed for 6-in. bottles; without glassware.

No.	A	B	C
Capacity, bottles	8	12	24
Each	**63.00**	**64.00**	**75.00**

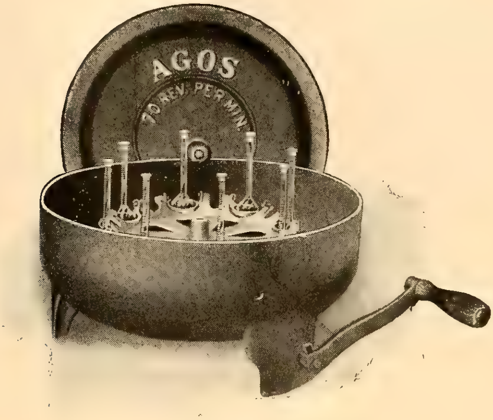
(Please state Current and Voltage when ordering)

15076 **Milk Testers—Babcock, 20th Century.** Same as No. 15045 above, but designed for 9-in. bottles; without glassware.

No.	A	B
Capacity, bottles	12	24
Each	**78.00**	**88.00**

15078 **Milk Testers—Babcock, Steam Turbine.** Has cast-iron frame and cover, ball bearing, removable steps, solid bronze motor wheel and bottle-carrier wheel, copper pockets, cover with "always cool" handle, and improved hot water tanks; provided with steam wheels and test bottles in separate chambers, reverse steam jet, steam gauge, steam valves and speed indicator; each tester is balanced and tested at factory and supplied with full outfit for testing milk; all bearings can be oiled without stopping machine and are protected by housing and drip channels; frame of No. 15078-C, because of its greater diameter, is somewhat different in shape than shown in illustration, and cover is hinged in middle.

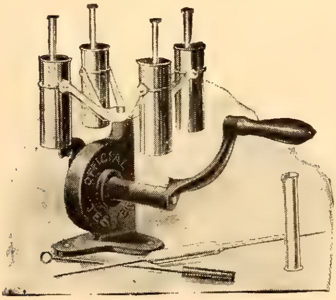
No.	A	B	C
Size, bottles	20	24	32
Weight, lbs.	120	120	220
Each	**45.00**	**50.00**	**58.00**



15080

15080 Milk Testers—Babcock. Latest improved form, with cast iron body and cover; spur and spiral gearing with machine-cut teeth, removable malleable iron bottle head, and seamless brass swinging pockets with reinforced ring; bottles can swing perfectly horizontal when in motion; ball bearings make it turn easier and run more smoothly than others; a perfectly accurate, efficient, simple and durable hand tester; supplied with set of regular Babcock milk bottles, pipette, acid measure, acid for 50 to 100 tests and full directions for manipulation.

No.	A	B	C	D	E
Size, bottles	4	6	8	10	12
Each	**13.50**	**14.00**	**15.00**	**16.00**	**17.00**



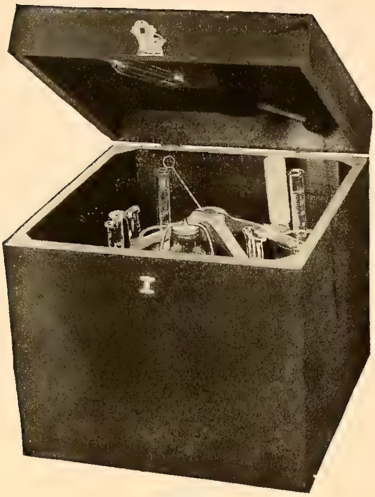
15082

15082 Milk Testers—Babcock. Noiseless in operation, motion being transmitted through spur and worm gear with cut teeth; bottle cups are of brass and so pivoted to heads that they cannot fly off when in motion; bottle heads and cups are removable, and whole apparatus can be taken apart in few seconds and packed; frame can be fastened solidly for use either by screwing down to table or bench, or clamped to edge by thumb screw and clamp for temporary use; furnished with full set of bottles, pipette, acid measure, test bottle brush, acid and directions; shipping weight, 15 lbs.

No.	A	B
Size, bottles	2	4
Each	**6.00**	**7.00**

1583 Milk Testers—Babcock. Same as No. 15075 above, but with equipment for milk and cream testing.

No.	A	B
Size, bottles	2	4
Each	**6.50**	**7.50**



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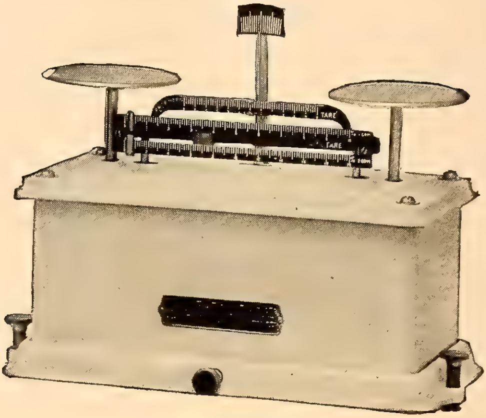


15090-95

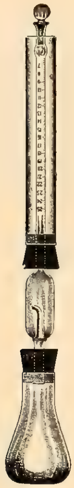
15085 **Milk Testers—Babcock; Travelers' Outfit.** Meets requirements of traveling dairy inspectors, separator agents and others desiring a portable outfit that is compact, light and accurate; includes one Babcock Milk Tester, No. 15075, four full milk test bottles, two double-neck skim and buttermilk bottles, two cream test bottles, one pipette graduated for milk and cream, one dairy thermometer, one bottle testing acid, one acid measure, one test bottle brush, and one set of directions for testing milk and cream; case made of finely finished hardwood, dimensions 10 x 10 x 10 in., and interior arranged to provide separate compartment for each piece of apparatus, thus preventing breakage; tester can be taken apart in moment's time and securely packed in case; weight of case and apparatus, about 15 lbs.

No.	A	B
Size, bottles	2	4
Each	**14.00**	**15.00**

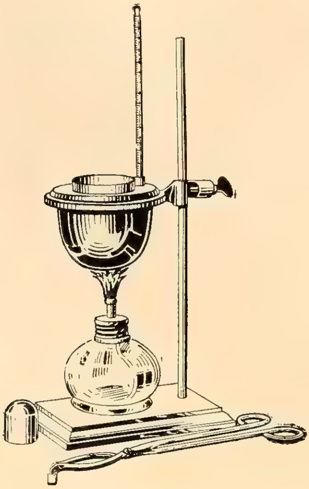
15090 **Moisture Test Balance.** For butter testing, etc.; constructed with percentage beams, so that 0.1% to 30% of moisture can be determined without calculation, when 10-gram samples are used; by means of two tare beams one or more dishes can be balanced and recorded; white-enameled; capacity, 120 grams; sensitiveness, 13 mg; slide beams graduated to 10% in 1/10% and 20% in 2/10%; complete, with 10-gram weight -- Each **35.00**

15095 **Moisture Test Balance.** For cheese testing constructed with percentage beams, so that 0.2% to 50% of moisture can be determined without calculation when 10-gram samples of material are used; by means of two tare beams one or more dishes can be balanced and recorded; white-enameled; capacity, 120 grams; sensitiveness, 13 mg; slide beams graduated to 20% in 1/5% and to 30% in 1/2%; complete, with 10-gram weight -- Each **35.00**

Any Other Balance Can be Furnished on Request.



15100



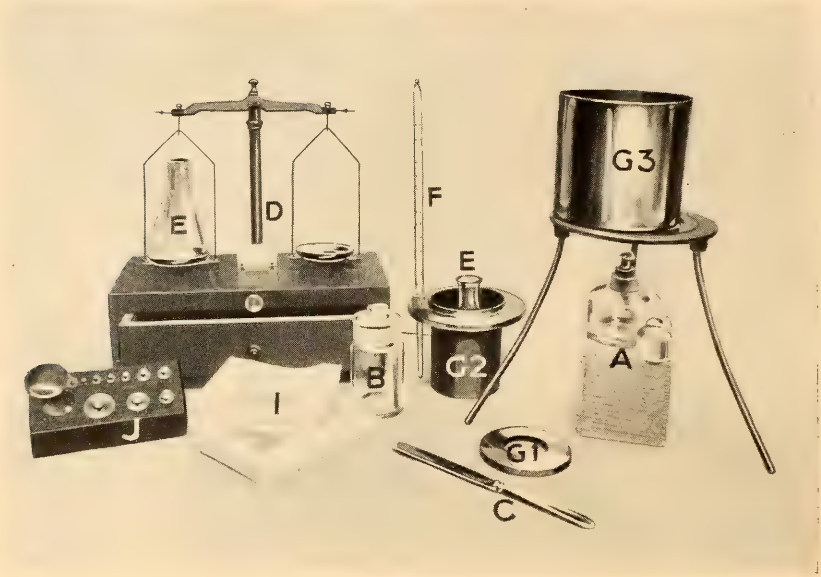
15105

15100 **Moisture Test Apparatus for Butter—Gray's.** For determination of water in butter; consists of extraction tube, flask, jacket, spirit lamp, two rubber stoppers and 6 cc cylinder; complete, with directions --- Each 3.50

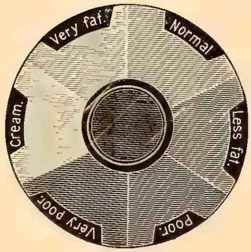
15105 **Moisture Test Apparatus for Cheese—Ames'.** Provides simple and reliable means of testing moisture per cent in cheese making; consists of jacketed paraffin container, made of copper; outside shell has rounded bottom to expose as much surface as possible to heat from alcohol lamp; inside shell is flaring, being larger in diameter at top than at bottom; aluminum sample cup sets closely inside receptacle, having contact all the way down, so that heat from paraffin is transmitted without loss; apparatus is supported by ring bracket, adjustable to any desired height upon vertical rod; stand, rod and bracket are nickeled; special high-range thermometer, reading from 100 to 200°C is included, also alcohol lamp, tongs for lifting sample cup and full directions; height of stand, 18½ in.; weight of outfit, 6 lbs. --- Each 5.00

BACTERIOLOGICAL MILK EXAMINATIONS

Materials for this will be found under Glassware, Microscopes, Incubators, Sterilizers, Stains, Culture Media, Filter Paper, Chemicals, Indicators, etc.



15110



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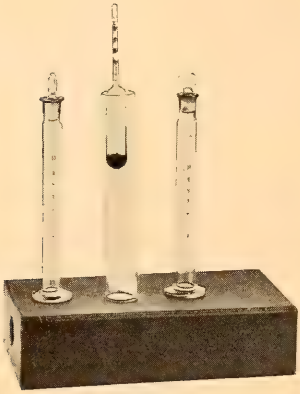


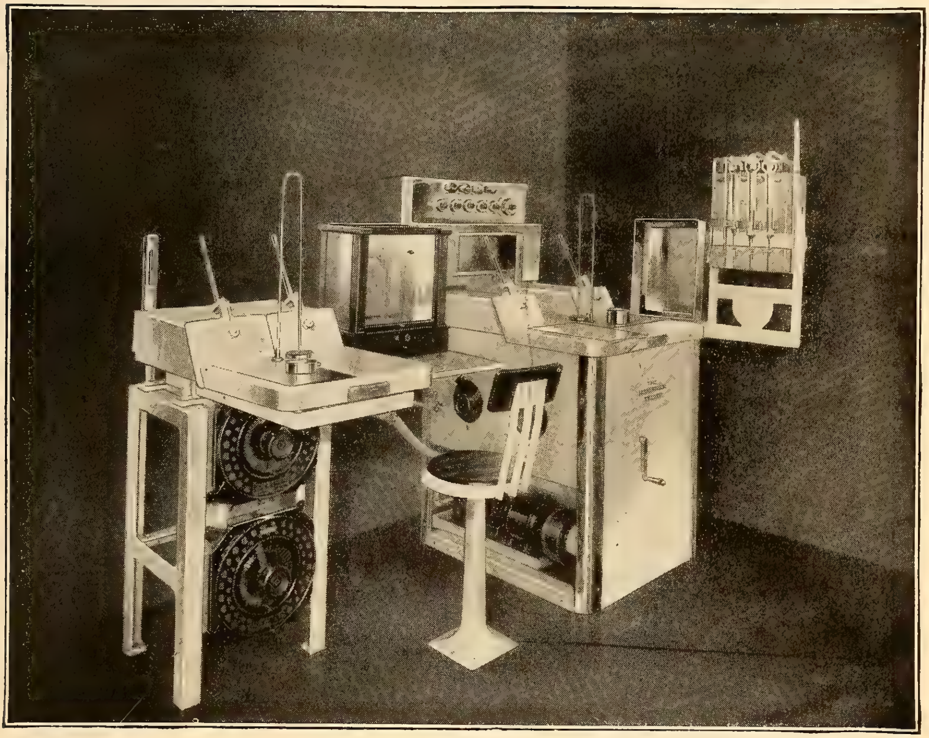
15120

15110 **Moisture Test Apparatus for Cheese.** Outfit consists of alcohol lamp, specimen jar, spatula, pulp scale, two 120 cc flasks, metal oil bath, 150 mm tripod, thermometer graduated to 320°, one lb. paraffin and set of weights, .01 gm to 100 gms; supplied complete and ready for use ---------- Each 24.85

Descriptive circular and directions on request

15115 **Milk Tester—Pioscope, Heeren's.** For determining richness of milk by comparison with standard colors; consists of rubber plate, having cell in center for the sample, and glass plate with colored segments ---------- Each 1.80

15120 **Milk Test Set—Holt's.** For testing human milk; complete, with directions ---------- Each 4.50



15125

15125 **Milk Tester—For Total Solids and Butter Fat.** Makes possible accurate test of dairy products for butter fat and total solids; dealers in milk products can standardize their products to a few hundredths of 1% upon both butter fat and total solids by its use; requires a very short time for making test; supplied without balance, weights, washstand and reagents; floor space, 56 x 82 in.; height table top, 35 in.; height over all, 68 in.; minimum current consumed, 1½ H. P.; maximum, 3 H. P.; for both fat and total solids, with thermostatic control ---Each **1275.00**

(Please specify Current and Voltage when ordering)

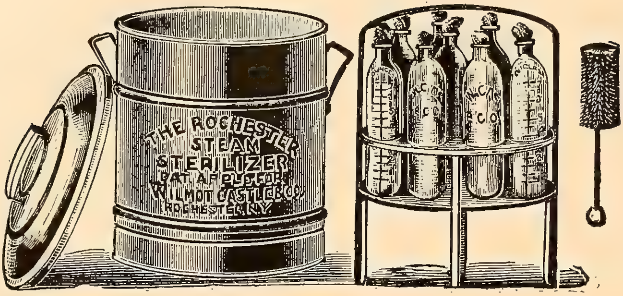
15130 **Milk Tester—For Total Solids and Butter Fat.** Construction similar to that of No. 15125 above; for fat and solids with rheostat control; floor space, 48 x 82 in.; height table top, 35 in.; height over all, 68 in.; minimum current consumed, 1½ H. P.; maximum, 3 H. P.-Each **1050.00**

(Please specify Current and Voltage when ordering)

15135 **Milk Tester—For Total Solids and Butter Fat.** Construction similar to that of No. 15125, but for fat side only, rheostat control; floor space, 56 x 48 in.; height table top, 35 in.; height over all, 68 in.; minimum current consumed, ¾ H. P.; maximum, 1½ H. P.-----Each **800.00**

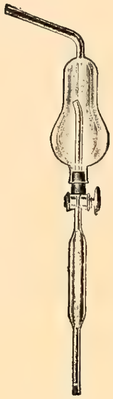
(Please specify Current and Voltage when ordering)

We Furnish Sulphuric Acid of the Right Specific Gravity for Babcock Testing.

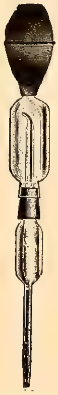

THE ROCHESTER STEAM STERILIZER PAT. APP'D FOR. WILMOT CASTLE CO. ROCHESTER, N.Y.

15142

4630



15145



15150

15155

4635

15140 Paper for Absorbing Milk. Fat-free strips, 580 x 62.5 mm.

Per box of 50 strips 2.80

Per box of 100 strips 5.20

15142 Pasteurizing Outfit. For laboratory use. Steam or hot water sterilization. Consists of a neatly finished vessel with cover and handles, rack for holding eight sterilizing bottles and beads around the sterilizing chamber marking the level to which water should be filled. Complete with bottles and brush for cleaning................Each 6.50

15145 Pipette. For use in connection with Babcock Test; mouth is applied to the slanting tube and milk drawn up until it is above glass top, cock then closed and measured milk put into test bottle; overflow, if any, is caught in glass overflow bulb or extension tube, which can be detached and emptied when desired........................Each 3.00

Per dozen 30.00

15150 Pipettes—Automatic. Operated by squeezing rubber bulb and then inserting point of pipette in milk; pipette fills when bulb is released, the overflow, which is slight, going into the large glass bulb; overflow can be emptied by removing stopper connection..........Each 2.50

Per dozen 25.20

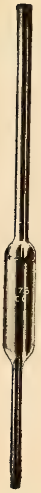
15155 Pipette—Babcock, Standard. To be used in connection with milk and cream test bottles..Each .30

Per dozen 2.90

Per gross 29.00

4630 Pipette—Capillary For use in preparing milk smears (see Technical Bulletin No. 49, of the N. Y. Experimental Station, Geneva, N. Y.); capacity, 0.01 cc; straight form..............................Each .80

4635 Pipette—Capillary. Same as No. 15160 above, but with glass bulb .... Each 1.25



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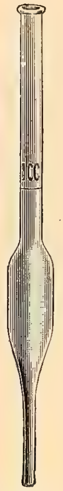

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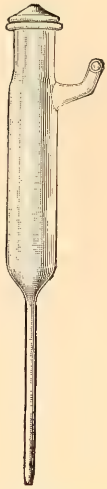

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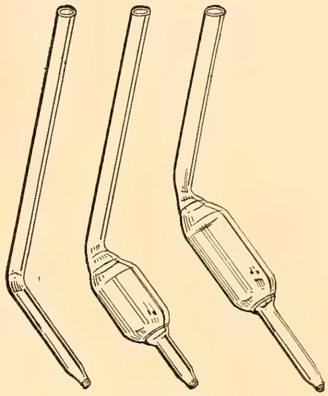

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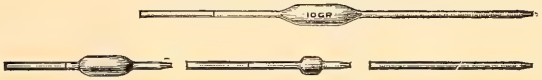


15200

15175 **Pipettes—Centrifuge.** For filling milk tubes; graduated to 1 cc__Each .20
Per dozen 2.20

15180 **Pipette—Cream.** With curved point, making it possible for operator to rest his elbow on table while making test; intended for use only as transfer pipette in weighing samples and is not graduated.

No.	A	B
Capacity, cc	9	18
Each	.25	.25

15185 **Pipettes—Milk and Cream.**

No.	A	B	C	D	E	F
Capacity, cc	5.9	6.04	8.8	9	17.6	18
Each	.25	.25	.25	.25	.25	.25
Per dozen	2.25	2.25	2.25	2.25	2.25	2.25
Per gross	22.50	22.50	22.50	22.50	22.50	22.50

15187 **Pipettes—Combined.** Same style as No. 15185, 17.6 and 18 cc____Each .30
Per dozen 2.80
Per gross 28.00

15190 **Pipettes—Russian.** Of simple, improved pattern.

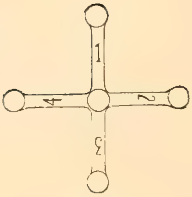
No.	A	B
Capacity, cc	8	17.6
Each	2.10	2.10
Per dozen	21.00	21.00

15195 **Pipettes—Weighing.** Curved type; to be used with No. 15345 weighing cross, but require no rubber tubing, thus saving time and possible loss of portion of sample; in operation, pipettes are set on a holder which rests on balance pan.

No.	A	B	C	D
Capacity, grams	1	2	5	10
Each	.20	.25	.30	.35
Per doz.	2.10	2.64	3.30	3.60

15200 **Pipettes—Weighing.** Same as above No. 15195, but straight, of heavy glass, tapered at bottom.

No.	A	B	C	D
Capacity, grams	1	2	5	10
Each	.15	.20	.25	.30
Per doz.	1.50	2.04	2.70	3.00



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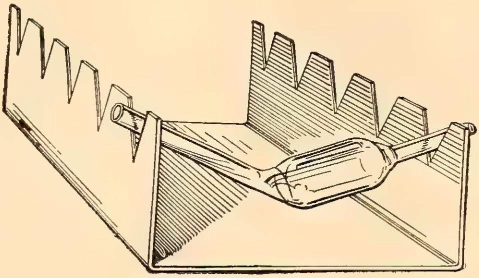

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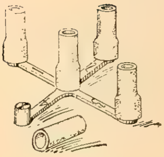
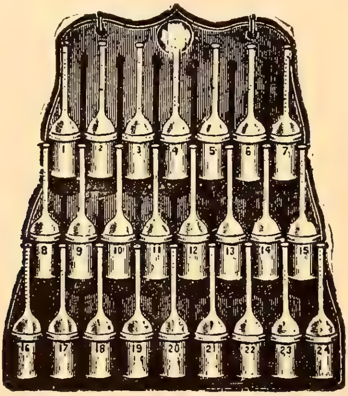


15205

15205 **Weighing Cross—For Pipettes.** Consists of cross with numbered arms, accommodating from one to five pipettes; permits five samples to be weighed with but six weighings; has rubber tubes fitting over knobs of pipettes, preventing evaporation; samples can be taken from their original containers, thus saving time; outfit consists of weighing cross and rubbers ________ Each 1.00
Per dozen 10.80

15206 **Rubber Tubing.** For above weighing cross ________ Per foot .10

15207 **Pipette Holder—Aluminum.** For above weighing pipettes; accommodates 5 pipettes and fits balance pan; dimensions, about 3 x 3 x 1½ in. high ________ Each 1.00

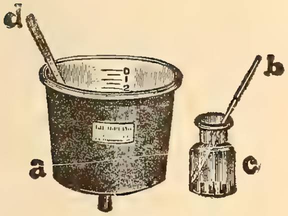


15210

15210 **Racks—For Babcock Test Bottles.** Of tin; hangs flat against wall; bottles stand upright and are easily filled.

No.	A	B	C	D	E
No. bottles held	24	36	42	54	64
Each	3.25	3.50	4.00	4.25	4.50

Milk Laboratories Completely Equipped.
Write us for particulars.



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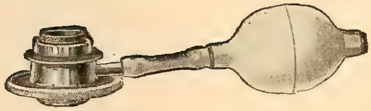


15240

15215

15225

15235

15212 **Rennet Tester—Marschall.** A simple but reliable means for the cheese-maker to ascertain the condition of his milk and to regulate its ripening to uniform conditions each day. Complete with graduated cup, a 1 cc pipette, a bottle for the dilution of the rennet, and a spatula for stirring the milk, in wooden case ---------- Each 4.00

15215 **Sample Bottle—Composite.** Used by many of the largest handlers of milk supplies; has rubber stopper that fits top of bottle tightly and prevents evaporation; stopper is easily removed, and as it is fastened to bottle with non-rust chain, cannot be lost.

No.	A	B	C
Capacity, oz.	4	8	16
Each	.18	.19	.21
Per gross	23.04	24.48	27.36

15220 **Sample Bottle—Composite.** Same as No. 15215 above, but with aluminum number tags.

No.	A	B	C
Capacity, oz.	4	8	16
Each	.20	.21	.23
Per gross	25.92	27.36	30.24

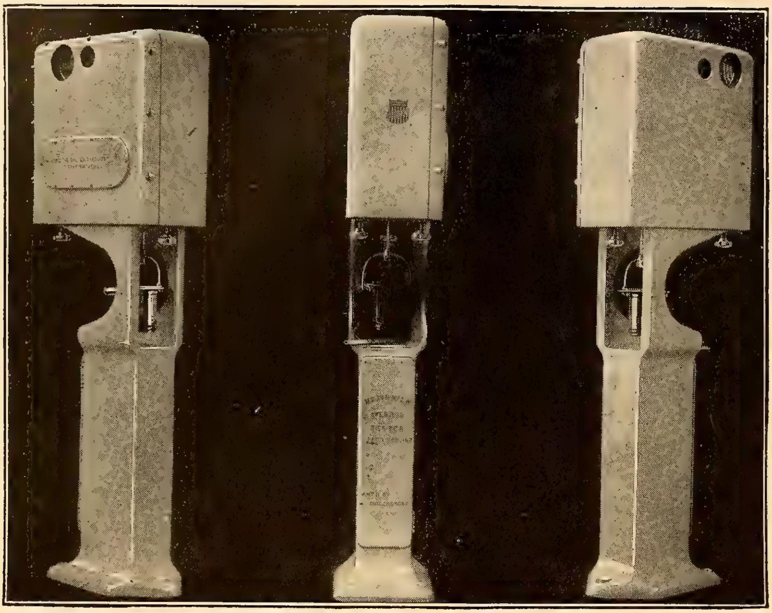
15222 **Aluminum Tags.** For numbering sample bottles; numbered to suit-Each .02

15235 **Sampler, Milk—Scoville's.** For taking sample from the top to the bottom of the milk in the can to be sampled. When reaching the bottom a movable cap closes, retaining the sample, which may then be discharged into the sample receptacle---------- Each 2.50

15240 **Sediment Tester—"Wizard."** Simple device for testing milk for cleanliness, as indicated by the amount of visible impurities which are strained or filtered out of a certain quantity (usually one pint) of milk; cotton disc, fitted in device, retains all gross dirt from milk passing through it; requires only 10 to 15 seconds to make test, and no milk is wasted---------- Each 5.00

15241 **Extra Discs** ---------- Per thousand 5.00

15245 **Sieve, or Strainer.** For cream sampling. Of wire mesh, with wire handle, of type as generally used for straining cream samples before centrifuging ---------- Each .20



15285

15270

15270 **Test-Bottle Testers—Babcock.** For quickly testing accuracy of graduations on milk or cream test bottles; made of brass, always ready for use; can be made to test for two important points on scale without being removed from bottle; furnished complete, with directions; for 6 inch, 18 gram.

No.	A	B	C	D	E
Test Bottle	8% Milk	10% Milk	30% Cream	40% Cream	50% Cream
Each	.90	.90	1.15	1.50	1.50

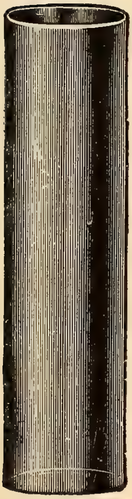
15275 **Test-Bottle Testers—Babcock.** Same as No. 15270 above, but for 6 inch, 9 gram.

No.	A	B	C	D
Cream Test Bottles	30%	40%	50%	55%
Each	1.50	1.50	1.50	1.50

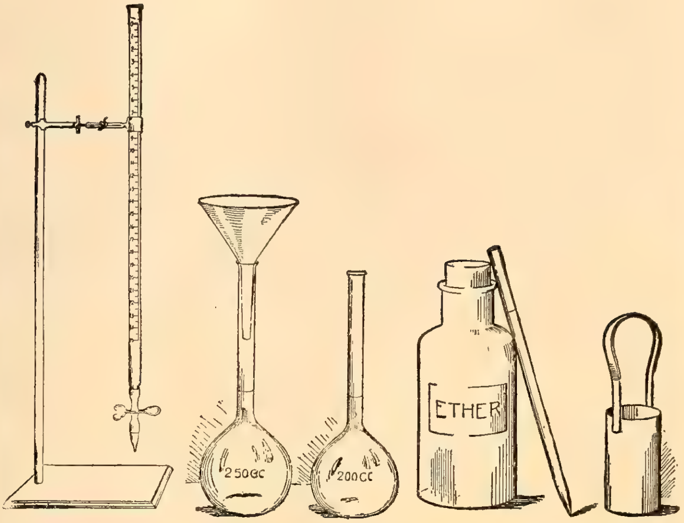
15280 **Test-Bottle Testers—Babcock.** Same as No. 15270, but for 9 inch, 9 gram or 9 inch, 18 gram.

No.	A	B	C	D
Cream Test Bottles	30%	40%	50%	55%
Each	1.50	1.50	1.50	1.50

15285 **Tester—Ice Cream Overrun.** Shows overrun of ice cream while it is still in freezer; is air tight, water tight, and steam tight, with fine parts of scale enclosed; of rugged construction of white japanned cast iron and suspended weighing frame of nickel-plated brass; accurate leveling insured by a three-point suspension; furnished with two adjustable counter-poised telescopic base cups with telescopic screw bases which may easily be adjusted for volume; height, 65 in.; width, 12 in.; depth of top cabinet, 22 in.; floor space required, 12 x 18 in.; supplied with all necessary parts for operation_____Each **385.00**



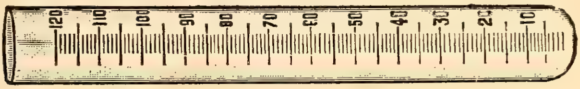
15300



APPARATUS FOR TESTING ICE CREAM OVERRUN

15290

15310



15295

15290 **Tester—Ice Cream Overrun—Benkendorf.** A very simple outfit, by means of which it is possible to quickly determine the overrun of any lot of ice cream without data in regard to volume or mix; supplied with directions for making test ________________________Each 7.20

15295 **Tester—Overrun for Butter—Rabild's.** Practical and simple outfit for testing the overrun in butter; consists of cylindrical tube about 6 in. long and about ⅝ in. in diameter, graduated from 0 to 120 or 130; only other apparatus necessary for the test is Babcock tester; wooden cores, into which the tubes fit, must be placed in the pockets; outfit furnished complete, or parts separately _____________________Each .45
Per dozen 4.50

15300 **Test Tubes.** Heavy—cream, for samples.

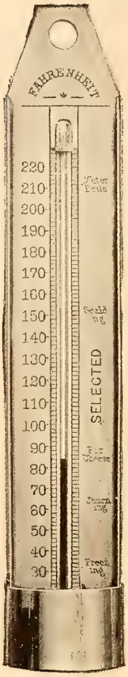
No.	A	B
Length, in mm	125	125
Diameter, outside, in mm	25	25
Each	**.10**	**.10**
Per dozen	**.95**	**.95**
Per gross	**9.50**	**9.50**

15305 **Test Tubes.** Of heavy glass, for oil; plain; length, 225 mm; diameter, 18 mm ____Each .10
Per dozen .90
Per gross 9.00

15310 **Test Tubes.** Of heavy glass, for oil; graduation marks, 125 mm from bottom; length, 225 mm; diameter, 18 mm ___________________Each .10
Per dozen .90
Per gross 9.00

14320

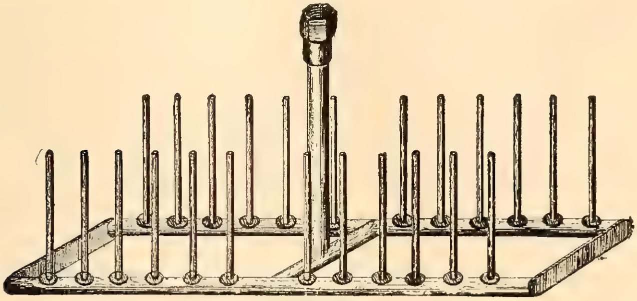
15315



15330

15315	**Thermometers, Dairy.** All-glass floating. With hand-written paper scale from 30° to 220° F in 2° divisions. About 10″ long. Mercury filled tube. This thermometer is accurate within 1 division of the scale ---Each	2.00
15320	**Thermometers, Dairy.** Flanged metal scale. Silver plated scale, gold plated straps and screws, magnifying mercury-filled tube, with sliding guard. Range from zero to 220° F. Length, 10″----------Each	1.50
15325	**Thermometers, Dairy.** Ordinary quality. Scale range from 100° to 220° F in 2° divisions, starting 4″ from the bulb. Magnifying front. Provided with arrow which indicates at 170° the pasteurizing temperature of milk --Each	1.75
15330	**Thermometers, Dairy.** Flanged metal. Selected ordinary grade. Nickeled brass scale ranging from 20 to 220° F, with nickeled figures and graduations, sliding guard, white back, mercury-filled tube. Of 10″ length --Each	.80
15335	**Thermometers, Dairy.** Same as No. 15330, but of 8″ length------Each	.70

Thermometers of Special Types Furnished.
Also Thermometers on Page 456.

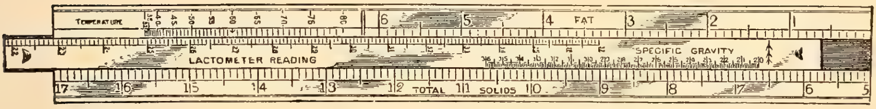


15340

15340 **Washer for Babcock Test Bottles.** Made of brass throughout and practically everlasting; equally serviceable for test tubes and bottles; lead bumpers on lower part of tubes protect the bottles when placed on the washers; fitting on upper end of supply tube will fit any regular hose connection.

No.	A	B	C	D	E
Size, bottles	8	12	16	20	24
Each	12.75	13.50	15.00	18.00	21.00

(Can be made to take any number of bottles desired.)



15341

15341 **Slide Rule, Richmond's—For Calculating Solids in Milk.** This is a mechanical calculating device and results agree closely with those given by Babcock's formulas. The lactometer (Quevenne) reading, the temperature (Fahrenheit) and the per cent of fat in the sample of milk being known, the device is operated by setting the central slide so that the lactometer reading is opposite the 60 degree (temperature) mark. The true lactometer reading is found opposite the line indicating the observed temperature of the milk. Having this corrected, the arrow is set on the sliding portion of the rule opposite the per cent of fat found in the milk corresponding with the corrected lactometer reading may then be read off——————Each 6.00

15342 **Tablet Test—Alkaline, Farrington.** Used for testing the ripeness of milk or cream; give very accurate results; useful for selecting sweet milk for different purposes, for testing acidity of cream or whey, and to show whether it is safe to mix several lots of cream; furnished with directions; outfit consists of 100 cc cylinder, 17.6 cc pipette and 1000 tablets——————Each 3.25

15343 **Table Test—Alkaline, Farrington.** Similar to No. 15255 above, but smaller, consisting of 20 cc vial, 17.6 cc pipette and 100 tablets——Each 1.15

15344 **Extra Cylinders.** 100 cc; for above outfit——————Each .50

15345 **Extra Vials.** 20 cc; for above outfit——————Each .15

15346 **Extra Pipettes.** 17.6 cc; for use in above test——————Each .25

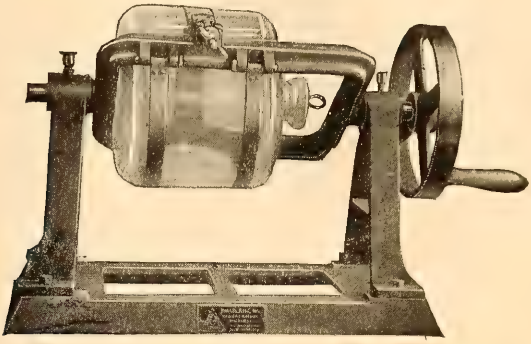
15347 **Alkaline Tablets**——————Per 100 .75
Per 1000 2.50

Reagents for Use With Milk Testing Equipment

The prices below are subject to change without notice, due to fluctuating market conditions. Prices as outlined include containers.

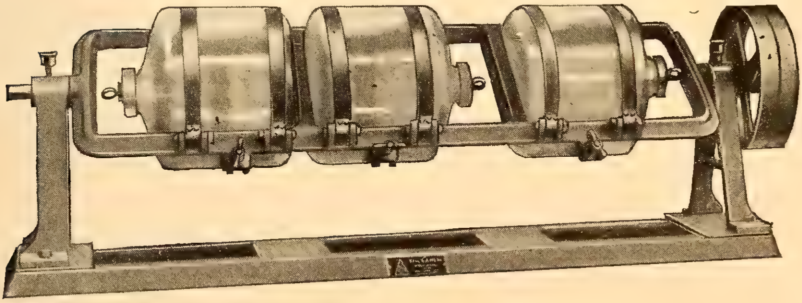
Acid Acetic, Glacial U. S. P. In glass stoppered bottle	1 oz.	.12
	4 ozs.	.22
	8 ozs.	.30
	1 lb.	.45
	5 lbs.	2.00
Acid Hydrochloric, cp. In glass stoppered bottle	1 lb.	.40
	6 lbs.	1.30
Acid Hydrochloric plus 10% Ferric Chloride. For Formaldehyde detection. In glass stoppered bottle	1 oz.	.14
	4 oz.	.25
	1 lb.	.55
	2 lbs.	.95
Acid Sulphuric, for Babcock Testing. In glass stoppered bottle	1 lb.	.35
	9 lbs.	1.80
	In Carboy—180 lbs.	25.75
(Empty Carboy is returnable for credit)		
Alcohol, Ethyl. In cork stoppered bottle	4 ozs.	.50
	8 ozs.	.85
Permit required	1 lb.	1.50
	5 lbs.	7.20
Ether, Concentrated, U. S. P. In cork stoppered bottle	4 ozs.	.20
	8 ozs.	.28
	1 lb.	.45
	5 lbs.	2.00
Ether, Petroleum. In cork stoppered bottle	4 ozs.	.27
	8 ozs.	.43
	1 lb.	.74
	5 lbs.	3.25
Phenolphthalein, Indicator. In cork stoppered bottle	1 oz.	.25
	4 ozs.	.90
Potassium Bichromate, commercial. In pasteboard carton	1 lb.	.50
	5 lbs.	2.40
	10 lbs.	4.50
Sodium Hydroxide, Normal Solution. In glass stoppered bottle	1 lb.	.75
	5 lbs.	1.45
	10 lbs.	3.50

Culture Media and Nutrient Materials for Bacteriological Examinations Available.



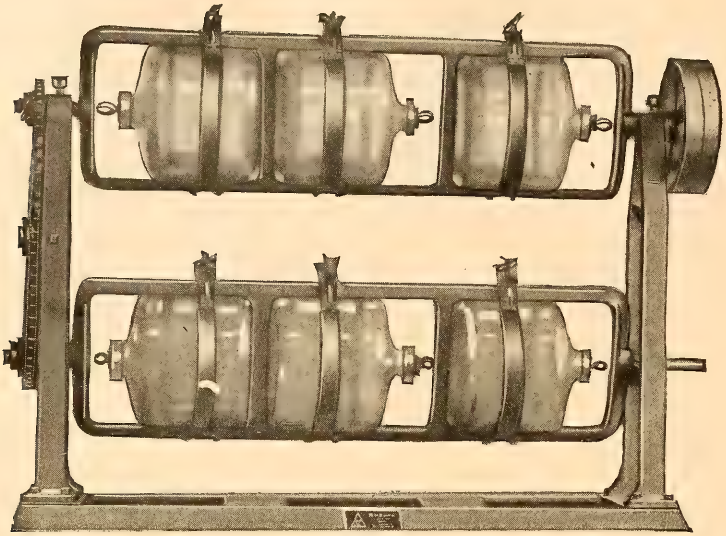
No.	Description		Price
15350	**Mill for Grinding Bacteria—Single-Jar.** With one Pyrex jar, 9 x 1-in. tight pulley for motor drive and handle for hand turning; without rubber stopper or steel balls	Each	36.10
15355	**Mill for Grinding Bacteria—Single-Jar.** Same as No. 15350 above, but without Pyrex jar	Each	25.00
	Extras:		
	Rubber Stopper, with handle for jar	Each	.15
	One Charge of 70–½ in. and 50–⅜ in. steel balls	Each	5.70

Note. Single-Jar Mill requires motor of ⅛ H. P. with worm gear and worm to reduce speed of jar to about 75 r. p. m.



No.	Description		Price
15360	**Mill for Grinding Bacteria—Triple-Jar.** With three Pyrex jars, 9 x 1-in. tight and loose pulleys for motor; without rubber stopper or steel balls	Each	93.30
15365	**Mill for Grinding Bacteria—Triple-Jar.** Same as No. 15360 above, but without Pyrex jars	Each	60.00
	Extras:		
	Rubber Stopper with handles	Each	.15
	Charge for each jar, consisting of 70–½ in. and 50–⅜ in. steel balls	Each	5.70

Note. Triple-Jar Mill requires motor of ¼ H. P. with worm gear and worm to reduce speed of jar to about 75 r. p. m.



15370

15380

15370 **Mill for Grinding Bacteria—Six-Jar.** With six Pyrex jars, 9 x 1-in. tight and loose pulleys for motor; without rubber stoppers or steel balls -- Each 208.94

15375 **Mill for Grinding Bacteria—Six-Jar.** Same as No. 15370 above, but without Pyrex jars -- Each 149.00

Extras:

Rubber Stoppers with handles ------------------------------ Each .15

Charge for each jar, consisting of 70–½ in. and 50–⅜ in. balls--Each 5.70

Note. Six-Jar Mill requires motor of ½ H. P. with worm gear and worm to reduce speed of jar to about 75 r. p. m.

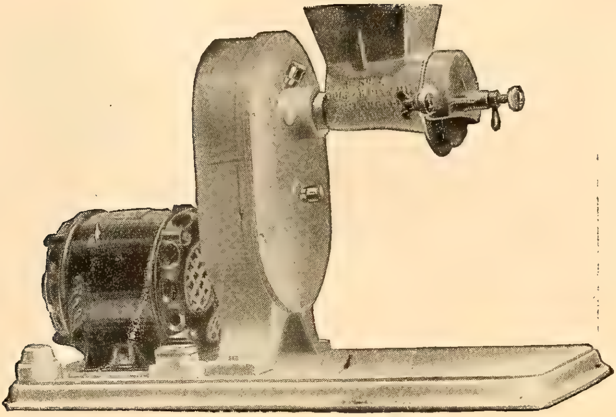
15380 **Jar—Bacteria Grinding.** Of Pyrex glass; designed by Eugene R. Whitmore, M.D., Lt. Col., M. C., U. S. A., especially for the manufacture of lipovaccines in the Army Medical School; dimensions: height over all, 9½ in.; outside diameter, 9 in.; neck ground flat on top, with inside diameter of neck, 1 to 1¼ in.; has very heavy wall with round corners inside and outside; jar will fit any ball mill with minimum frame clearance of 9 1/16 in. or, better, 9 1/8 in.; without rubber stopper or steel balls ------------------------------------ Each 11.10
(10% discount allowed in original barrels containing 6 jars.)

15385 **Rubber Stopper.** Extra long; to fit jar No. 15380 above; diameter at top, 34 mm; diameter at bottom, 28 mm; length, 38 mm-------- Each .15

Note. In Army Medical School this stopper is covered during grinding operation with gauze pad soaked in cresol, held in place over the stopper by means of rubber band around neck of jar.

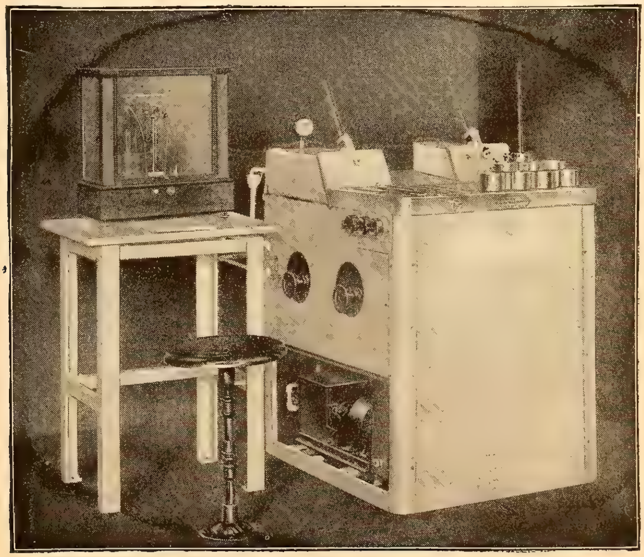
15390 **Balls.** Of high carbon chrome alloy steel.

No.	A	B
Diameter, in.	⅜	½
Per 100	**3.00**	**6.00**
Per 1000	**25.00**	**50.00**

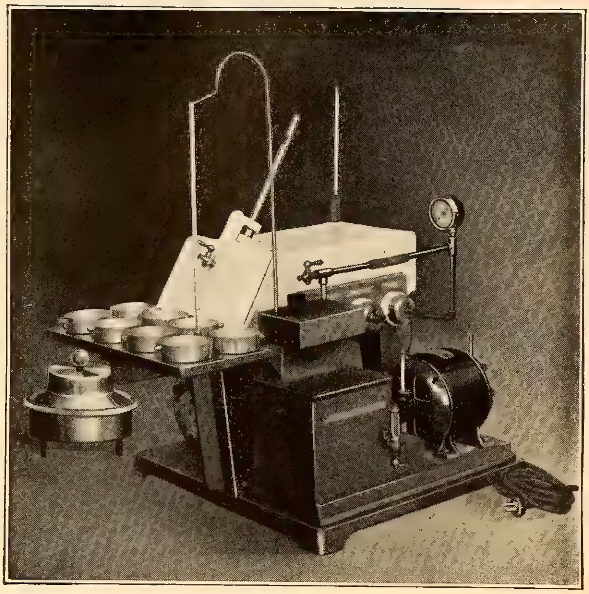


15395

15395 **Mill Grinding—Electric.** Constructed of best grade of materials, each part guaranteed against defective workmanship and material for period of one year; mounted, with electric motor, on heavy, substantial base, which eliminates all vibration while mill is in operation; gear connection between motor and mill is fully enclosed in cast-iron stand supporting mill at height allowing receptacle to be placed under discharge opening; ball bearing box is provided at extreme end of grinding shaft to take up thrust, thus insuring very easy running mill and consequent saving in power, wear and tear; grinding plates are flat and of exceptionally hard metal, tested to grind unusually fast and true and with very small, comparative power consumption; temper screw and tightener allow convenient and perfect regulation of the fineness of finished product; grinding unit, which is quickly and easily detached and attached to driving mechanism, is furnished either for dry or wet grinding; with a number of these units operator can have one unit for grinding food stuffs, another for poisons, a third for oily substances, an individual unit for each color, etc.; this interchangeable unit feature makes mill a great labor and time saver in laboratories, where many different substances are being ground ----------------------------------Each 150.00
(Please specify voltage and current when ordering.)



15400



15410

15400 **Moisture Tester.** Obtains accurate results in much less time than the drying method requires; total solids determination can be made on liquids such as milk, syrups or catsup in twenty-five minutes, compared with seven hours by the long drying method; works in like manner with solid material like coal, feeds, grain, starch, etc.; vacuum oven hastens drying; a special cooling dessicator helps in cooling dishes to room temperature before weighing; floor space, complete with balance stand, 56 x 34 in.; without balance stand, 28 x 34 in.; height to table top, 35 in.; dimensions of vacuum oven, inside, above heating plate, 7 x 15 x 3½ in.; arranged for 110 and 220 volts, direct or alternating current; furnished with all apparatus necessary, but without chemical balance ________________Each **725.00**

(Please state current and voltage when ordering.)

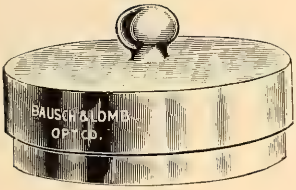
15405 **Moisture Tester.** Same as No. 15400 above, but without balance stand ________________Each **690.00**

(Please state current and voltage when ordering.)

15410 **Moisture Tester.** Especially fitted for use in laboratories where great speed is not essential, or for smaller laboratories, as it can be placed directly on laboratory table; makes moisture test on practically any liquid or solid; apparatus consists of special vacuum oven, vacuum pump, and air-cooled dessicator; table space over all, 20¼ x 28 in.; height, 23 n.; height from table to hot plate, 12 in.; dimensions of vacuum oven, inside, above heating plate, 7 x 15 x 3½ in.; arranged for 110 and 220 volts, direct or alternating current; furnished complete, including use of patented process for making rapid moisture or total solids test ________________Each **375.00**

(Please state current and voltage when ordering.)

Special Literature Sent on Request



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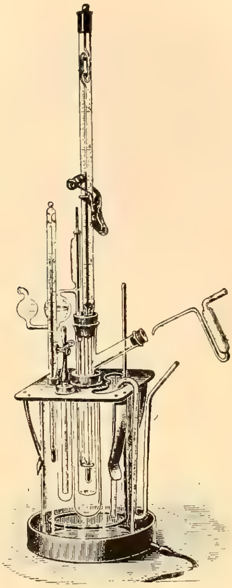


15415

4460

4455 **Moist Chambers (Culture Dishes).** Large, double dish of heavy, clear, white glass; cover fits loosely and is provided with knob.

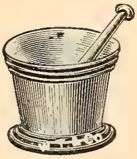
No.	A	B
Height, mm	70	80
Diameter, mm	200	240
Each	**3.75**	**4.50**

4460 **Moist Chambers (Culture Dishes).** Same as No. 4455 above, but without knob.

No.	A	B
Height, mm	70	80
Diameter, mm	200	240
Each	**2.50**	**3.00**

15415	**Molecular Weight Determination Apparatus—Beckmann's.** Operates by freezing point method; consists of glass cooling jar with nickeled cover and stirrer, four air jackets, four freezing tubes with corks, three filling pipettes, one inoculating rod, one rubber stopper, zinc trough with glass siphon for drawing off cooling solution and sulphuric acid drying tube for use with hygroscopic solutions; without thermometers	Each	18.00
	Parts and Accessories for No. 15415:		
15419	**Air Jacket**	Each	.75
15420	**Cooling Vessel,** with nickeled cover and stirrer	Each	4.00
15421	**Filling Pipette**	Each	1.00
15422	**Freezing Tube,** with corks	Each	1.50
15423	**Freezing Tube,** with ground-in stopper and ground-in tubulation for thermometer	Each	3.00
15424	**Inoculating Rod**	Each	1.00
15425	**Stirrer** of glass, with platinum ring containing about 2.1 gm. **Price on application.**		
15426	**Sulphuric Acid Drying Tube**	Each	1.20
15427	**Thermometer** for cooling mixture, graduated from –20° to 40°C, in 1° divisions	Each	2.50
15428	**Thermometer, Beckmann Differential,** with auxiliary scale, graduated in 1/100° divisions	Each	25.00
15429	**Zinc Trough,** with siphon	Each	3.00
15430	**Siphon** only, of No. 15429	Each	1.00

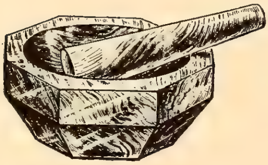
For Special Thermometers, see Index.



15440

5810

4475



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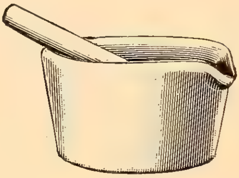


5815

15435 **Mortars—Agate.** Superior quality; with pestle.

No.	A	B	C	D	E	F	G
Diameter, mm	30	35	40	45	50	55	60
Each	**3.60**	**4.00**	**5.00**	**5.50**	**6.00**	**7.00**	**8.00**
No.	H	I	J	K	L	M	N
Diameter, mm	65	70	75	80	90	100	120
Each	**8.80**	**11.00**	**12.80**	**15.00**	**18.00**	**22.00**	**30.00**

4475 **Mortars—Glass.** Of clear white glass; very heavy and strong; with pestle.

No.	A	B	C	D	E	F
Capacity, cc	30	60	125	250	500	1000
Diameter, mm	60	80	100	110	135	155
Each	**.28**	**.30**	**.40**	**.50**	**.80**	**1.20**

15440 **Mortars—Iron.** With pestle of iron.

No.	A	B	C	D	E
Capacity, cc	250	500	1000	2000	4000
Diameter, mm	100	125	150	175	225
Each	**.60**	**1.10**	**1.50**	**2.10**	**3.20**

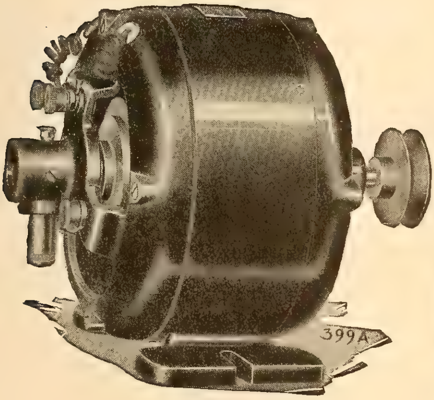
5810 **Mortars.** Of Coors porcelain, with lip; glazed outside; with porcelain pestle glazed to grinding surface.

Size No.	0	1	2	3	4	5
Diameter, mm	70	90	150	135	165	210
Inside diameter, mm	60	90	100	115	145	175
Height, mm	45	60	70	80	105	130
Capacity, cc	75	165	360	600	1280	1000
Length of pestle, mm	113	140	180	200	255	240
Each	**.42**	**.72**	**1.08**	**1.62**	**3.06**	**5.40**

5815 **Mortars.** Of Ohio porcelain; with lip; rough inside, glazed outside; medium shallow form.

Size No.	0	1	2	3	4
Diameter, mm	65	80	100	110	130
Each	**.35**	**.45**	**.55**	**.65**	**.90**
Size No.	5	6	7	8	
Diameter, mm	150	165	185	213	
Each	**1.20**	**1.25**	**1.45**	**1.60**	

5820 **Mortars.** Of Coors porcelain; deep form with lip; glazed outside; with porcelain pestle; Size No. 0; diameter, 95 mm; height, 64 mm; capacity, 200 cc; length of pestle, 113 mm____________________Each **.90**



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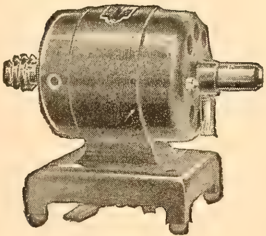
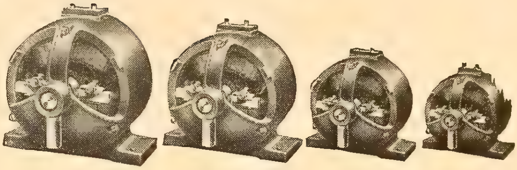


15451



15450

15445 **Motors—Electric.** For alternating current. Open type constant service motors to operate continuously at full load on circuits of not more than 10% above or below rated voltage and frequency without injurious heating. Strong and rugged construction, thoroughly insulated and operating with high efficiency on lighting circuits without noise. Small sizes have cup and wick oiling system while larger sizes are furnished with oil ring lubrication. Pulleys of smaller sizes are of the V grooved type for round leather belts and crowned face pulleys for flat belting are supplied with the larger frames. These motors can be supplied with polyphase windings and of different frequencies or speeds, if desired. Prices include base and pulley.

No.	A	B	C	D	E	F
Horse Power	1/20	1/12	1/8	1/6	1/4	1/3
Full Load, R. P. M.	1750	1750	1750	1750	1750	1750
Pulleys	1″	1¾″	1¾″	2″	2″	3½″
For 110 V., 60 Cyc., each	**23.50**	**31.50**	**35.75**	**38.50**	**44.00**	**55.00**
For 220 V., 60 Cyc., each	**26.25**	**34.25**	**38.50**	**41.25**	**46.75**	**57.75**

15450 **Motors—Electric.** For direct current. A constant speed motor with characteristics as listed below. Capable of hard and continuous service to withstand sudden and heavy load variations. No starting rheostat is required for ratings smaller than ¼ H. P. Can be furnished with shunt or compound windings. Prices include base pulley and starting box for ¼ H. P. and ⅓ H. P.

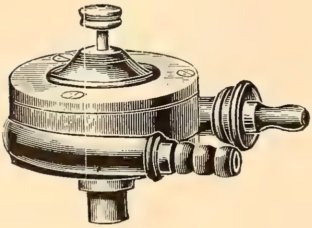
No.	A	B	C	D	E	F	G
Horse Power	1/30	1/25	1/20	1/16	1/12	1/10	1/8
Full load, R. P. M.	1000	1200	1500	1800	1800	1350	1650
Pulleys	1″	1″	1″	1″	1″	1¼″	1¼″
For 110 V., each	**19.00**	**19.25**	**19.50**	**19.75**	**20.00**	**22.50**	**23.00**
For 220 V., each	**21.50**	**21.75**	**21.75**	**22.00**	**22.50**	**25.00**	**26.00**
Horse Power	1/6	1/4	1/3				
Full load, R. P. M.	1800	2000	2150				
Pulleys	1½″	2″	2″				
For 110 V., each	**30.00**	**44.00**	**53.00**				
For 220 V., each	**32.50**	**48.00**	**57.00**				

15451 **Motors—Universal.** These motors operate on either alternating or direct current at voltage of from 104 to 115. They will be found very useful in the laboratory for stirring operations.

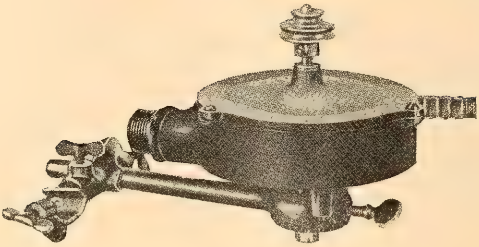
Motors larger than 1/20 H. P. are fitted with rheostat integral with base and all motors are fitted with grooved pulley.

No.	A	B	C	D
H. P.	1/20	1/16	1/12	1/8
Each	**14.25**	**20.00**	**26.00**	**29.00**

Plug and 6 ft. cord extra -- **1.00**



15455



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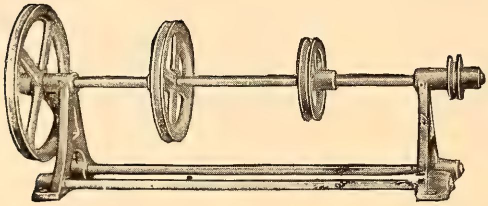

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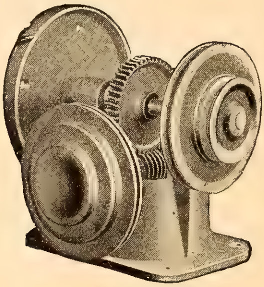


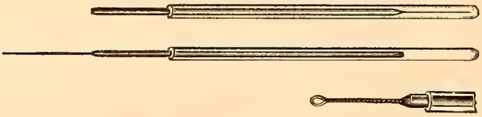
15465

15455 **Motor—Rabe's.** For water, steam or compressed air; turbine only—Each 8.00

15460 **Motor.** For water, steam or compressed air; can be attached to ordinary apparatus stand and used for either stirring or shaking; diameter, 5 in. ——Each 10.00

15465 **Speed Reducing Gear.** To convert speed of motors into slow, powerful motion; round plate can be removed and direct connection made to shaft; fast running pulley has three grooves and slow running pulley two grooves, thus giving a wide range of speeds; geared 48 to 1—Each 7.50

15470 **Countershaft.** To connect motors with machines; shaft is ¼ in. diameter and 12-in. long; pulleys are 1, 2, 3, and 4 in. diameter——Each 2.50



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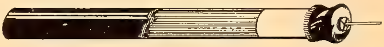


15495

15475 **Needles—Inoculating.** Heavy platinum needle, set in glass handle.

No.	A	B
Length, mm	40	80
Each	1.50	2.00

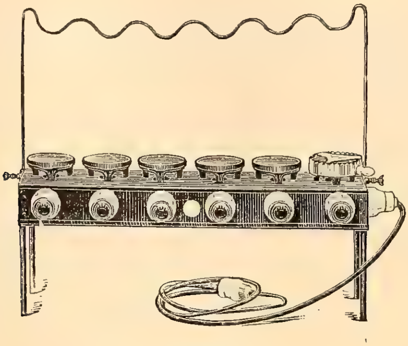
15480 **Needle—Inoculating.** Of nichrome wire, set in glass handle; straight ——Each .40

15485 **Needle—Inoculating.** Same as No. 15485 above, but looped——Each .50

15490 **Needles—Inoculating.** Heavy platinum needle mounted in aluminum handle; glass tube, closed at one end, forms holder into which needle may be reversed when instrument is not in use; style B is useful for transferring cultures of bacteria.

No.	A	B
Style	Straight	Twisted Loop
Each	2.00	2.50

15495 **Needle Holders—Kolle's.** Has handle of hard rubber and aluminum; will accommodate needles of various sizes; total length, 280 mm ——Each 1.50

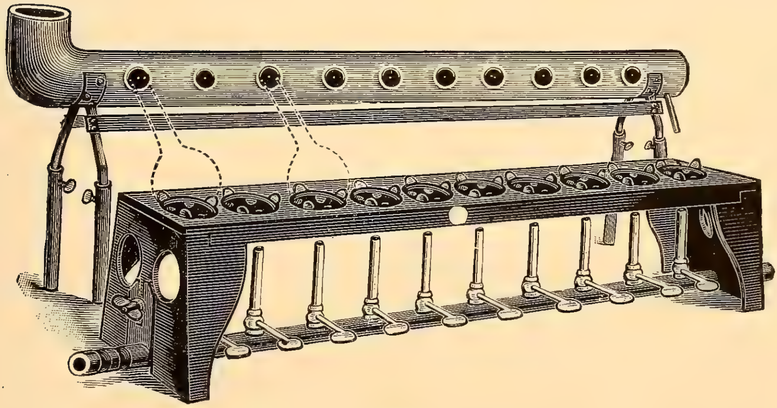


15500

Nitrogen Determination Apparatus

15550 Digesting Shelf—Kjeldahl's. Electrically heated; oblong form, 5½ in. wide and 9 in. high; made of sheet iron, with rod to support flasks; each heater, which is 3½ in. in diameter, is a unit, either one or all of which may be used at one time, as desired.

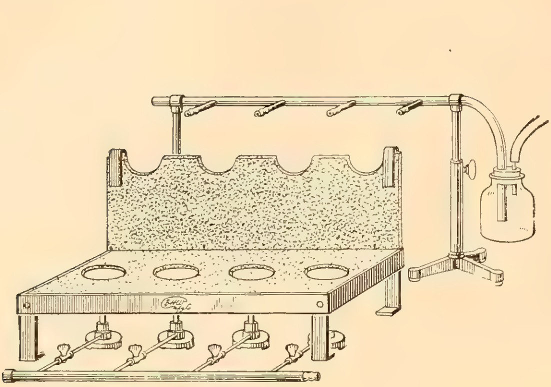
	No. A	B
Number of burners	6	10
Length, in.	24	40
Each	75.00	112.50



15505

15505 Digestion Shelf—Johnson's. Used extensively in Agricultural Experimentation Stations; necks of flasks rest in holes in lead pipe which conveys fumes to chimney; has shelf; complete.

	No. A	B	C
No. of flasks	6	10	13
Length, in.	29	46	60
Each	54.00	67.50	82.50



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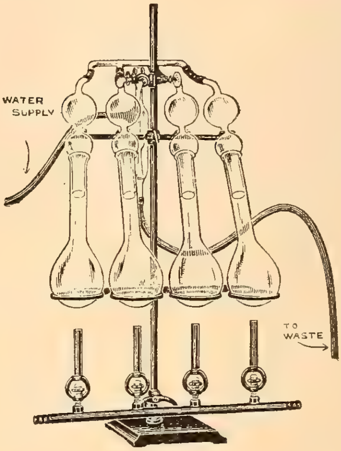
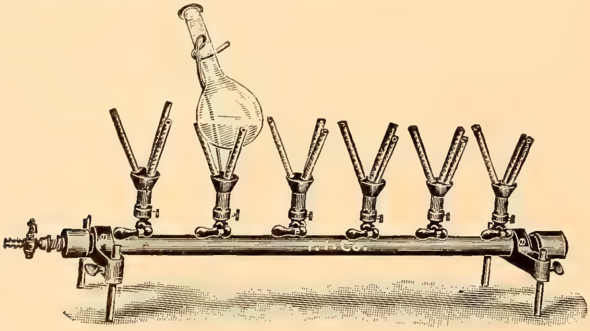


15515

15510 Distilling Apparatus—Micro Digestion Shelf. Suitable for any digestion work using micro flasks; small enough to be readily kept in a cupboard when not in use; shelf and support for neck of bottle made of transite, mounted on iron frame; fume pipe made of lead, of suitable length to enter a flask of alkaline solution; by connecting this to a vacuum pump digestion may be carried on in the laboratory without a hood.

No.	A	B	C
Number of burners	4	6	8
Each	24.00	36.00	48.00

15515 Digestion Apparatus—Fumeless, Sy. Constructed so that digestions can be made any place; has water supply and drain; fumes are disposed of by means of filter pump, without the use of fume closet; furnished complete with brass filter pump connecting bulb tubes, four 500 cc Kjeldahl flasks, stand and burner ---------------------Each 20.00



15520

15520 Digesting Racks—Kjeldahl's. Folin's improved form; burner and bulb rack are a self-contained unit, eliminating a more cumbersome shelf; arrangement of burners and the adjustable feet are shown in illustration; individual neck supports are furnished, but the method of carrying the mouths of the flasks directly into a lead pipe, connecting with a ventilating flue, is recommended.

No.	A	B
Number of burners	6	12
Each	23.40	39.00

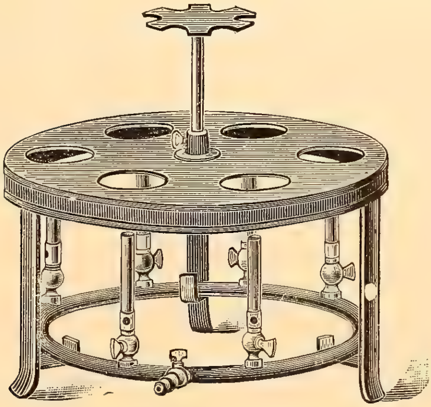
Rack supports for neck of flasks extra -----------------------Each .33

15525

15525 **Hot Plate, Electric—Gilmer's.** Designed particularly for the Kjeldahl determinations, but is not limited to this kind of work. The parts are few, simple and replaceable without the delay usually incurred in special apparatus. There are four principal parts and ten such as nuts, bolts, terminals, etc. Constructed of hydraulic pressed asbestos and accommodates any of the ordinary laboratory vessels. Particularly adapted to agricultural chemical laboratories, where their use is indispensible. Manufactured in voltages of 55, 73 1/3 and 110 volts, each stove consumes about 400 watts. Heating capacity is such that a regular 800 cc flask containing 450 cc of water will be boiled and 250 cc distilled over inside of 60 minutes. Complete Each **5.00**

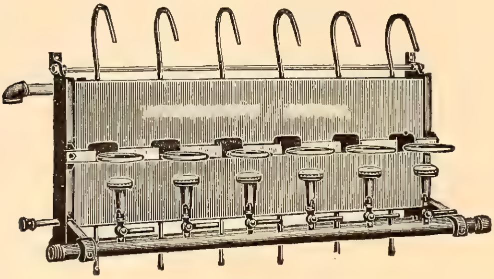
Replacement parts:

No. A.	Base Plates	Each	**1.90**
No. B.	Cover Plates	Each	**1.60**
No. C.	Heating Units	Each	**1.50**
No. D.	Rewinding of Heating Units	Each	**1.25**
No. E.	Heating Unit Plate	Each	**.60**
No. F.	Coiled Wire	Each	**1.00**
No. G.	Fahenstock Connector, single,	Per doz.	**.35**
No. H.	Terminals, complete	Per doz.	**.75**



15530

15530 **Digesting Shelf—Kjeldahl's.** Round form; 16 inches in diameter by 10 inches high. Of heavy iron construction with six burners fitted individual stopcocks and upright support for necks of flasks Each **20.00**



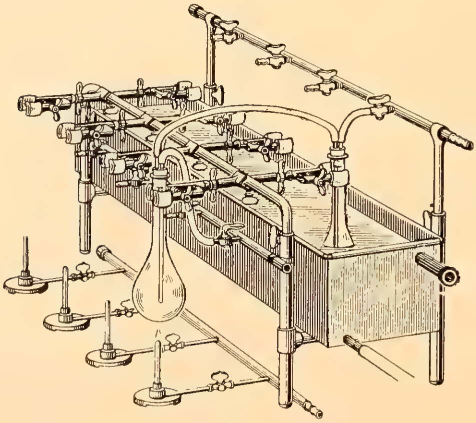
15535

15535 **Distilling Apparatus—Kjeldahl's.** With Folin modifications; made of heavy tinned copper, reinforced internally and piped in special manner for most effective possible cooling; provided with quickly removable, adjustable and interchangeable ring supports of two sizes, 5 in. and 4 in. diameter; copper still is bolted between cast-iron end brackets, by which it is secured to wall at convenient height above bench and at back of bench, thus taking up a minimum of working space; brackets are reversible, so that pipe connections may be made at either end.

No.	A	B
Number of burners	6	12
Each	54.60	93.60

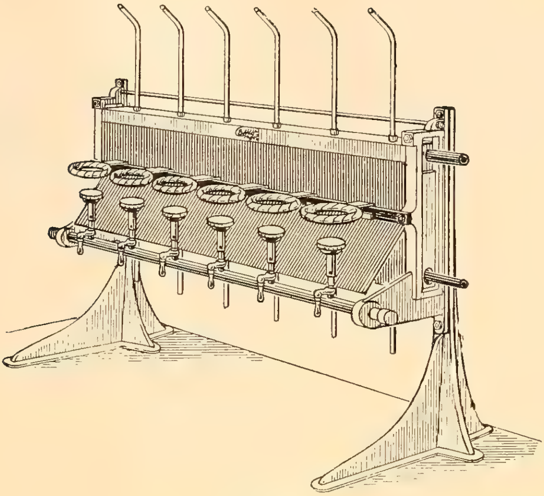
Extra:

Rings, 4-in. diameter	Each	.40
Rings, 5-in. diameter	Each	.45



15540

15540 **Distillation Apparatus—Micro.** Constructed on small scale, occupying minimum amount of space on laboratory table; rear top pipe is connected to a vacuum pump, filtered air entering the evaporation bottle through the front pipe; thus the condensation gathered in the glass flasks in the copper condensing tank is free from contamination from air in the laboratory; regularly made to accommodate four burners -- Each 72.00



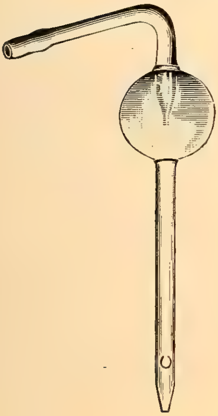
15545

15545 **Distilling Apparatus—Kjeldahl's Improved Form.** Made of polished copper, with pure block tin condensing tubes; mounted on iron stand, as illustrated; rings to hold flasks of large or small diameter, each wrapped with asbestos cord; shield of black sheet iron between the burners and water tank; water or gas connections may be at either end.

No.	A	B	C	D
No. of burners	4	6	10	12
Each	67.50	77.00	95.00	112.50

15550 **Distilling Apparatus—Kjeldahl's Improved Form.** Same as No. 15545 above, but without stand; made to screw on wall.

No.	A	B	C	D
No. of burners	4	6	10	12
Each	60.00	70.00	84.00	102.00



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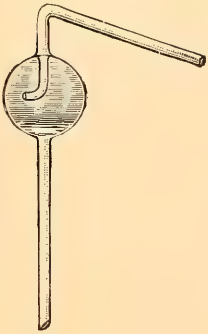

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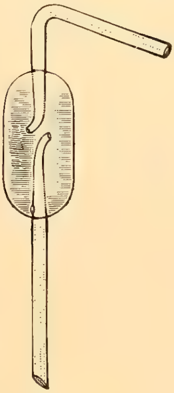

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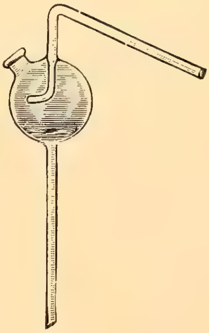
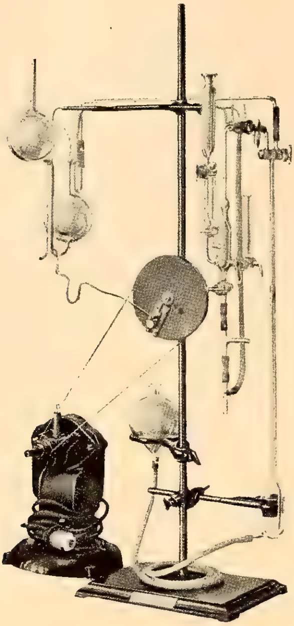


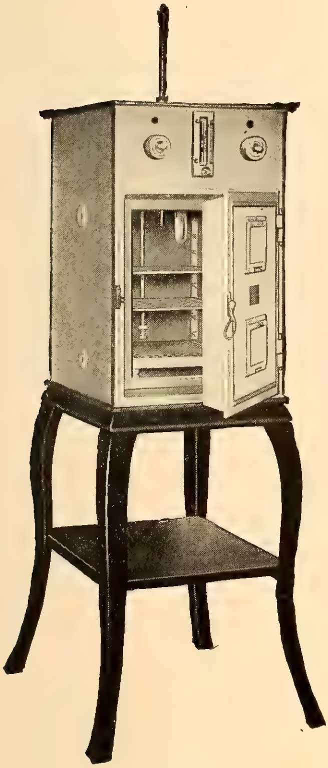
2565

2545	**Distilling Tube—Hopkins'.** Safety form for rapid work in nitrogen determination; with single straight tubulation inside bulb____Each	.75
2550	**Distilling Tube—Kjeldahl's.** Spherical form ____________________Each	.60
2555	**Distilling Tube—Kjeldahl's.** Spherical form____________________Each	.75
2560	**Distilling Tube—Kjeldahl's.** Cylindrical form __________________Each	.75
2565	**Distilling Tube—Kjeldahl's.** Jennings' new form, especially intended for water analysis; with tubulare in bulb, which permits introduction of water or permanganate solution with removing stopper__Each	1.12



15650	**Van Slyke Apparatus.** For the gasometric determination of aliphatic amino groups; permits analysis of any volume of solution up to 10 cc and gives results with an accuracy of 1/20 mg of nitrogen; method is applied to various problems, including study of protein digestion, both in vitro and in vivo, determination of nature of amino acids yielded by hydrolysis of small amounts of protein, determination of free amino groups in fixing the constitution of various organic substances, and the determination of amino acid nitrogen in urine, blood and tissues; apparatus complete, mounted on stand, with glass parts, pulley, shaking device, etc.; regular size, without motor	Each	42.00
	Glass parts only, for No. 15650 above	Per set	33.00
	Deaminizing Vessel, for No. 15650 above	Each	22.50
	Burette, for No. 15650 above	Each	6.25
	Absorption Pipette, for No. 15650 above	Each	2.50
15655	**Van Slyke Apparatus—Micro.** For the gasometric determination of aliphatic amino groups; same as No. 15650 above, but small, so-called micro size; without motor	Each	42.00
	Glass Parts only, for No. 15655 above	Per set	33.00
	Deaminizing Vessel, for No. 15655 above	Each	22.50
	Burette, for No. 15655 above	Each	6.25
	Absorption Pipette, for No. 15655 above	Each	2.50
	Absorption Pipette, modified by Benedict	Each	5.00
15660	**Motor.** For use with Van Slyke Apparatus, Nos. 15650 and 15655; has rated capacity of 1/60 H. P. and speed of 2500 r.p.m.; can be used for both alternating and direct current; furnished complete with rheostat, plug and connecting cord	Each	20.00

(Please state voltage and current when ordering)



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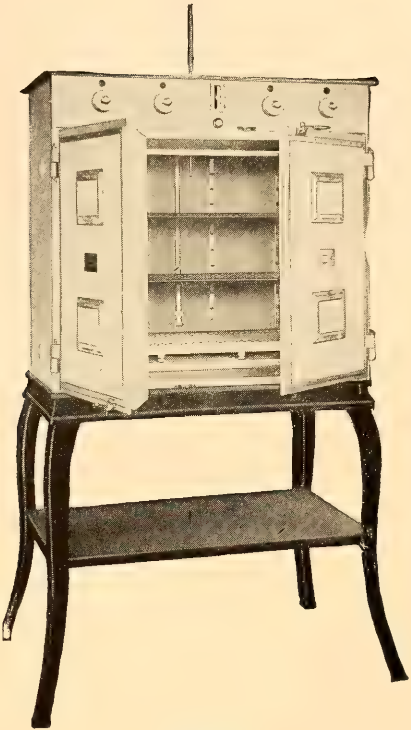


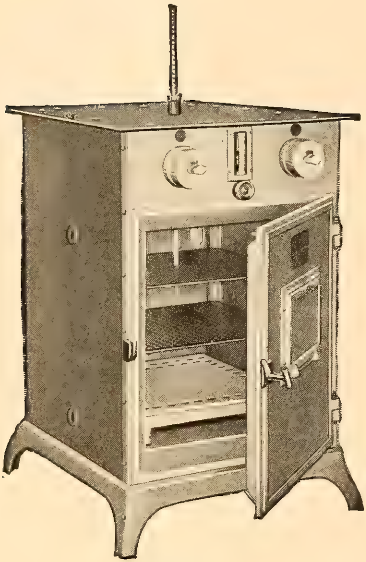
16000-D

Ovens—Freas', Electric. Approved by the National Board of Fire Underwriters; have become favorably known for their durable construction, reliability and accuracy, and are satisfactory for long, continuous and unattended operation; are always ready for use, and are easily and quickly regulated for any desired temperature; constructed with a double wall of heavy asbestos transite, which is absolutely fireproof, with cast aluminum frame and door; air space between inner and outer asbestos walls is filled with air-cell asbestos, permitting very little loss of heat and reducing current consumption to a minimum; interior of each is fitted with shelf racks, allowing shelves to be placed at any desired height; a small electric lamp within the oven, which can be lighted at will, is used for illumination and as a pilot; small window in door permits contents to be observed without opening door; two openings on each side of oven, which can be closed if desired, give ventilation; Freas regulator, made entirely of metal and of durable construction, so constructed that no vapor from evaporating residues can reach contact points, regulates the temperature to within a fraction of a degree; temperature range is from that of the room to 180°C, and in high temperature oven, to 260°C; heating element, wound for 600 watts and requiring 250 watts to maintain a temperature of 105°C, consists of wire wound resistance plate on bottom of oven.

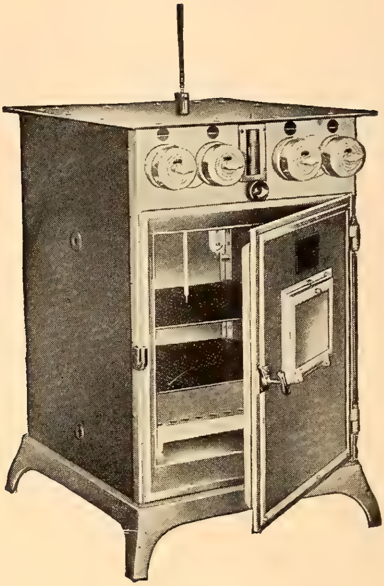
16000 **Ovens—Freas', Electric. (Type R).** On heavy iron base, with legs; intended for temperature to 180°C; furnished with flexible cord and plug to fit socket of ordinary lighting circuit and with high grade thermometer of special design, with graduation etched to 200°C.

No.	A	B	C	D
Length, cm	40	45	50	55
Width, cm	40	35	65	80
Depth, cm	35	42½	35	45
Each	**210.00**	**230.00**	**285.00**	**345.00**

(Please state Voltage and Current when ordering)



16005



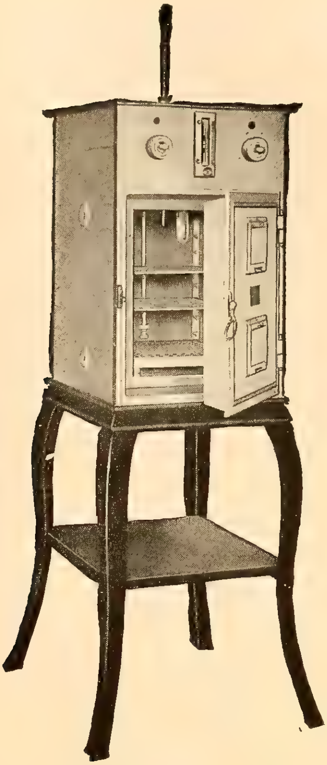
16015

16005	**Oven—Freas', Electric.** Same as above, but with cast iron base to stand on table; height, 30 cm; width, 30 cm; depth, 30 cm ______ Each	115.00
	(Please state Voltage and Current when ordering)	
16010	**Oven—Freas', Electric.** For high temperatures; mounted on heavy iron base with legs; provided with two "heat" switches, one of which can be turned off when desired temperature has been reached; furnished with flexible cord and plug to fit socket of ordinary lighting circuit and with high grade thermometer of special design, with graduation etched to 300°C; height, 45 cm; width, 35 cm; depth, 42½ cm ______ Each	245.00
	(Please state Voltage and Current when ordering)	
16015	**Oven—Freas', Electric.** Same as above, but with cast iron base to stand on table; height, 30 cm; width, 30 cm; depth, 30 cm ______ Each	140.00
	(Please state Voltage and Current when ordering)	

STAINS AND SOLUTIONS

Under this title we publish a booklet covering the use of Biological Stains.

We will be pleased to send a copy.



16020

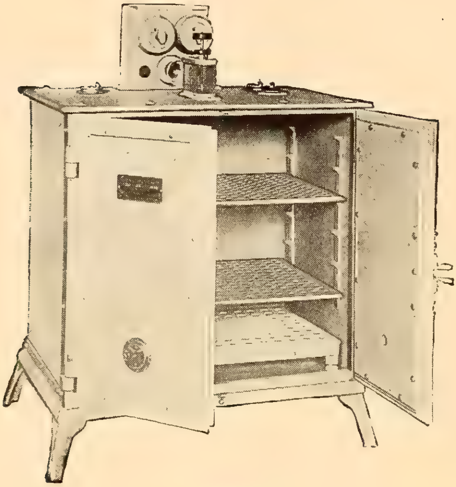
16020 **Oven—Freas', Electric.** Mounted on heavy base with legs; equipped with removable glass door and low wattage heating plate in addition to regular heating plate, making it a combined oven and incubator, with temperature range to 70°C as an incubator, or to 180°C as a drying oven; supplied with flexible cord and plug to fit socket of ordinary lighting circuit, and with thermometer of special design, with graduations etched to 200°C; height, 45 cm; width, 35 cm; length, 42½ cm……Each 230.00

(Please state Voltage and Current when ordering)

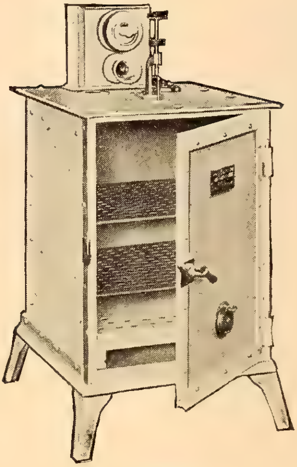
16025 **Oven—Freas', Electric.** Same as above, but with cast iron base to stand on table; height, 30 cm; width, 30 cm; depth, 30 cm……Each 135.00

(Please state Voltage and Current when ordering)

See also Incubators, Sterilizers, Autoclaves, Inspissators and Paraffin Ovens.



16065-A



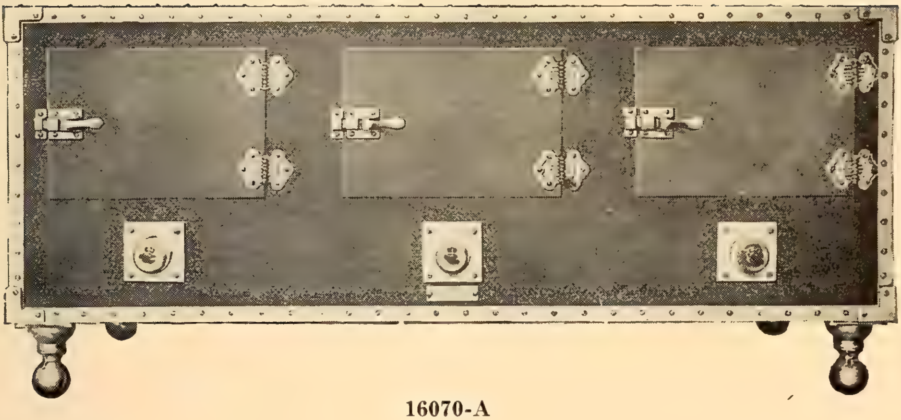
16065-B

16065 **Oven—Thelco, Electric.** Substantially constructed of asbestos wood with cast aluminum frame, door frame and adjustable racks for the perforated aluminum shelves; suitable for routine laboratory work or students' use because of ease of setting and accurate maintenance of temperature, which is kept from within 1° of room heat to 160°C by the bi-metallic regulator; contacts are outside the chamber; pilot lamp indicates when circuit is opened or closed; has openings in top of oven for ventilation and thermometer, and adjustable ventilators in top and door; heating plate is removable; supplied with cord and plug ready to connect with light socket.

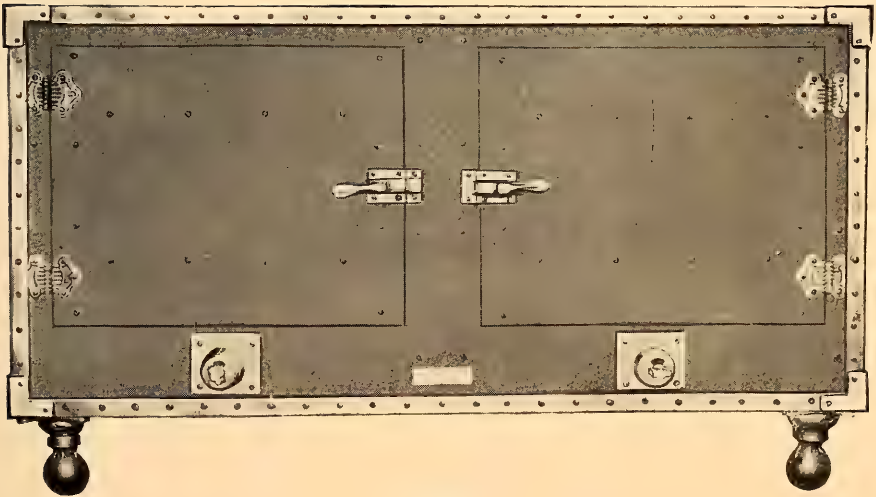
No.	A	B
Height, cm	36	31
Width, cm	31	25
Depth, cm	46	25
Each	**60.00**	**40.00**

(Please state Voltage and Current when ordering)

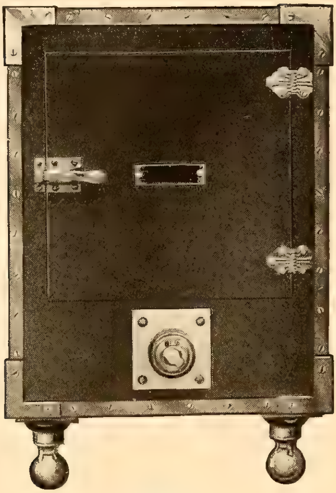
We welcome your correspondence regarding any matter of laboratory procedure. If you are undecided as to selection, let us know your needs and we shall endeavor to advise.



16070-A



16070-C



16070-F

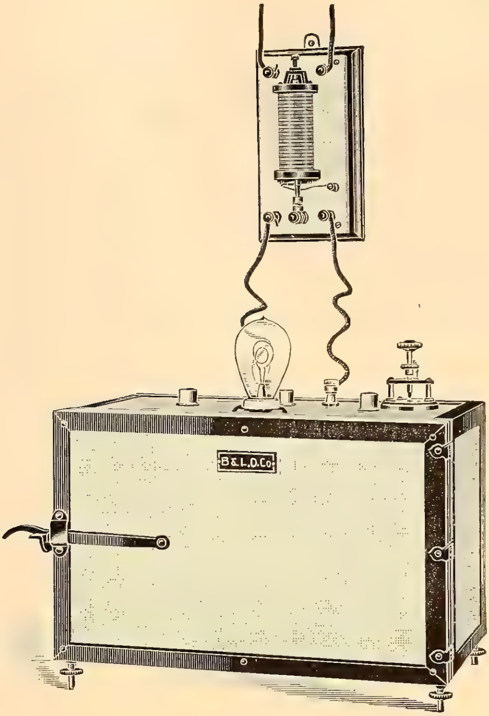
16070 Oven—Despatch, Electric. Constructed of polished steel with nickel-plated angle iron corner fittings and walls of asbestos from 1 to 2 inches apart, depending on size of oven, packed with mineral wood; has wire heating units guaranteed not to burn or crack, and made of alloy that does not oxidize at high temperature or become brittle with repeated use; provided with ventilators at top and bottom, which carry off moisture as in drying samples, thus expediting drying process and aiding accurate temperature control without the use of a thermostat; has three-heat switch; temperature can be maintained from 90° to 100°C on low point, 100° to 108°C on middle point, and 140° to 150°C on high point; oven A is a three compartment drying oven, and as each compartment can be used separately, it is really three small ovens in one; ovens B and C are also compartment ovens and are principally designed for moisture tests; ovens D and E are especially designed for moisture determinations, being equipped with a three point switch that keeps the temperature at 100°C, ventilators at top and bottom, removable screen shelves and tested thermometer; oven G, which is small and compact and easily moved, is used largely for Pekar slick tests, being provided with an observation window so that the material being dried can be watched without opening door.

No.	A	B	C	D	E	F	G
Height, cm	23	41	41	31	23	15	18
Width, cm	36	51	51	33	31	28	41
Depth, cm	51	46	46	46	41	41	20
No. of Compartments	3	3	2	4	3	2	
Each	**308.00**	**297.00**	**237.00**	**94.00**	**88.00**	**88.00**	**50.00**

16075 Oven—Despatch, Electric. Same as above No. 16070, but with thermostatic control.

No.	A	B	C
Height, cm	31	23	15
Width, cm	33	31	28
Depth, cm	46	41	41
No. of Shelves	4	3	2
Each	**112.00**	**106.00**	**101.00**

(Please state Voltage and Current when ordering)

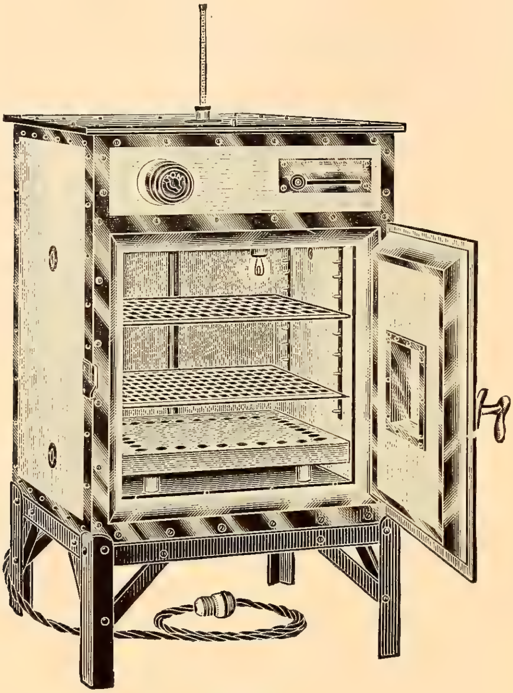


Oven—Edmond's Drying. Constructed to heat and regulate rapidly and to dry any substance in the least time possible. To this end the minimum amount of heat absorbing material is used, the design gives a free draft and no water-jacket is used. The variation of temperature at different levels, which is a necessary accompaniment of the rapid drying, is not sufficient to harm the substance being dried, or to affect the accuracy of ordinary analytical work. If it is desired to dry a substance at an exact temperature this may be done by placing the substance close to the thermometer bulb and regulating the temperature accordingly.

This oven has a brazed frame of ¾-inch angle brass, into which are set double panels of hard and soft asbestos. Heavy adjustable legs are supplied. The connections for the heating coils are between the double walls. There are six coils, through which the controlling device gives a range of 75° anywhere between 0° and 160° c. To insure the entire range of temperature an extra set of six heaters and disc are necessary. The equipment includes two shelves of sheet brass. Height of over 25 cm; with, 41 cm; depth, 23 cm.

16080	For 110 volts	Each	**75.00**
16081	For 220 volts	Each	**77.00**

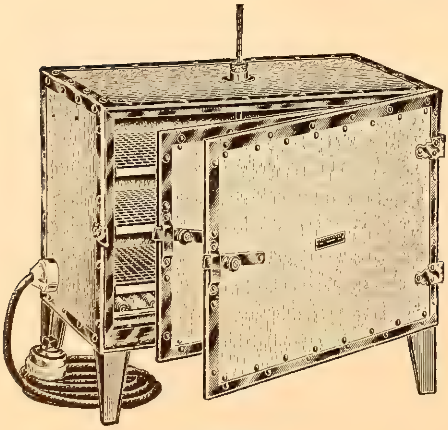
We solicit correspondence or suggestions as to the improvement of our apparatus.



16085

16085 **Oven—Drying, Electric.** Has double wall construction, both walls being made of insulating material with a special filling between walls; is heated by a special heating plate and controlled by an electro-thermostat having a calibrated scale; temperature range is from 70° to 180°C; pilot lamp inside chamber indicates if current is on or off; furnished with snap switch, 175 mm angle iron stand and thermometer; height, 25 cm; width, 25 cm; depth, 25 cm__________Each **110.00**

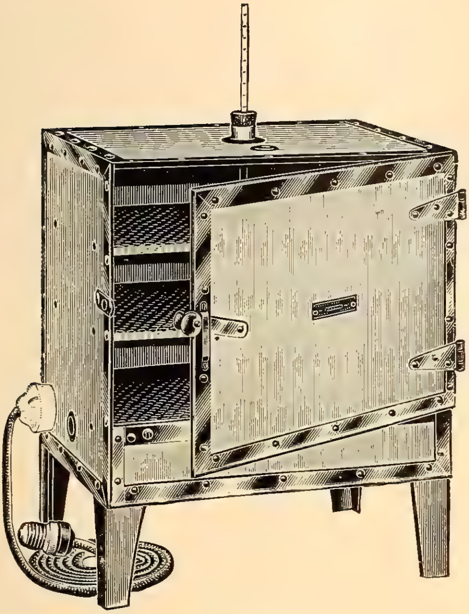
(Please state Voltage and Current when ordering)



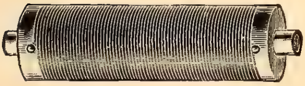
16090

16090 **Oven—Drying, Electric.** Has double wall construction, outer wall being of insular material, and inner of Russian iron; temperature range is 60° to 200°C, automatically controlled by an electro-thermostat; furnished complete with pilot lamp and two removable shelves; height, 25 cm; width, 45 cm; depth, 25 cm _______________Each 125.00

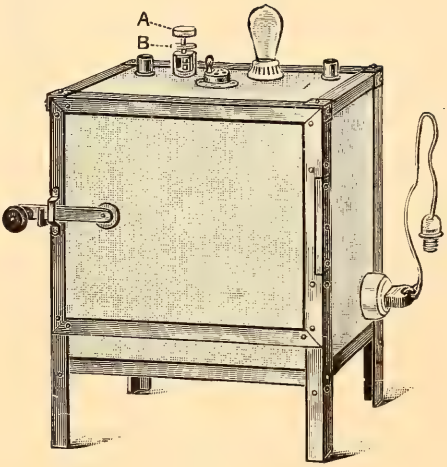
(Please state Voltage and Current when ordering)



16095



16100



16105

16095	**Oven—Drying, Electric.** Of single wall construction; has temperature range 60° to 150°C; heated electrically and controlled automatically by electro-thermostat; furnished with pilot lamp, two removable shelves; height, 25 cm; width, 35 cm; depth, 25 cm; maximum current consumption, 6 amperes	Each	65.00

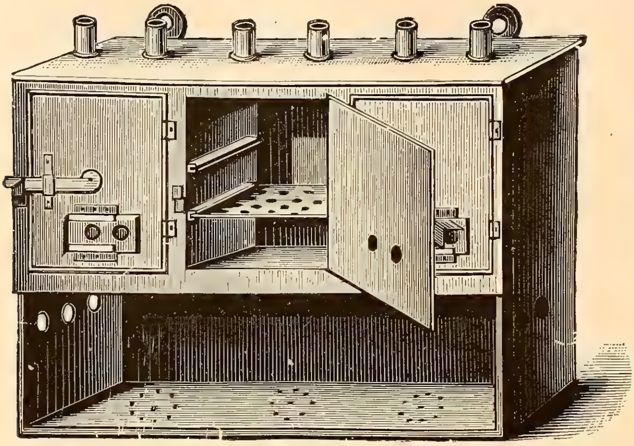
(Please state Voltage and Current when ordering)

16100	**Oven Heating Unit—Electric.** As used for drying ovens No. 16090 and No. 16095; consists of lava stone 2⅝ inches long and ¾ inch in diameter, wound with nichrome wire, kept in place by fire-proof cement; made respectively for 1 and 1½ amperes on 110 volt current	Each	2.25

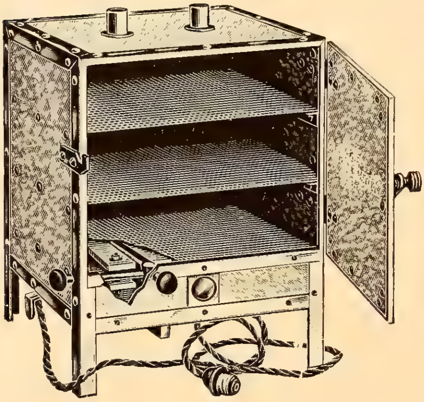
(Please state Voltage and Current when ordering)

16105	**Oven—Drying, Electric.** Constructed of asbestos board, with heavy brass binding; regulation is positive and the control within one degree, the range being from 50° to 200°C; can be attached to ordinary socket on 110 volt circuits, direct or alternating and can be supplied for 220 volts; has contact points on outside, and independent heating units; height, 25 cm; width, 31 cm; depth, 25 cm	Each	45.00

(Please state Voltage and Current when ordering)



16115

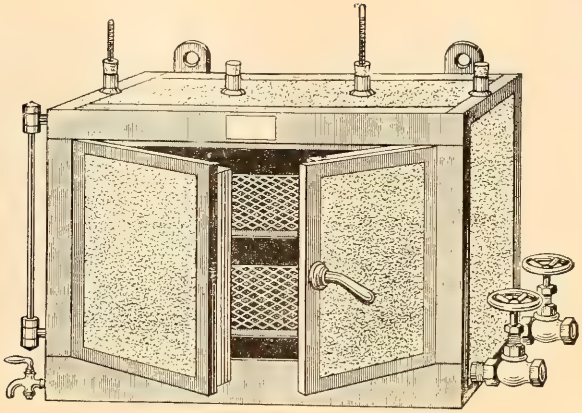


16110

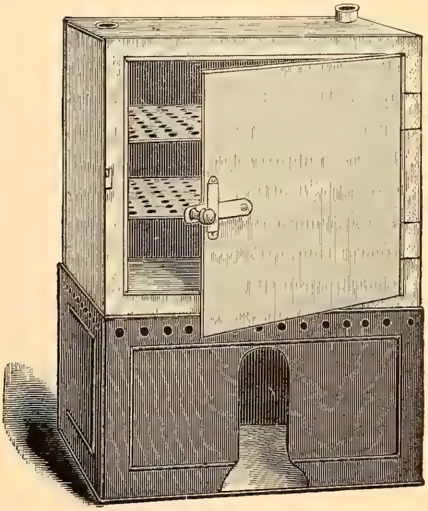
16110 **Oven—Drying, Electric.** Constructed of asbestos compound bound with metal; special heating units can be supplied for certain kinds of work; range of temperature is from 50° to 160°C and is accurate to within 1°C; furnished with three shelves, the lower one having highest temperature; controlled without use of multiplier or lever arrangement and gives positive action; weight, 32½ lbs.; height, 25 cm; width, 31 cm; depth, 25 cm.................Each **30.00**

(Please state Voltage and Current when ordering)

16115 **Oven—Drying, Fresenius'.** Single-wall oven made of heavy polished copper, with sheet iron back and base; partitioned into three chambers, each 175 x 175 mm; provided with movable shelves, doors with ventilators and tubulatures for thermometer and gas regulator; outside dimensions: length, 525 mm; height, 220 mm; depth, 175 mm; may be hung upon wall.................Each **32.00**



16120



16125

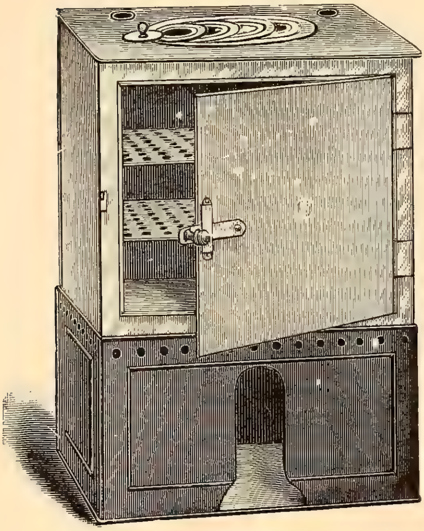
16120 **Oven—Drying, Double Wall.** Made of heavy copper tinned on inside and covered with transite on outside; doors are air cushioned; steam coils provided for heating, but gas can be used; control valves are for control of steam supply; has brass cock for drawing off the water in the jacket, and openings in top for filling water in the jacket, and thermometer.

Inside Dimensions.

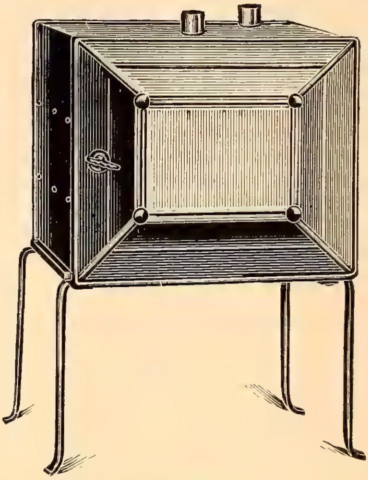
No.	A	B	C	D	E
Height, cm	150	200	250	400	750
Width, cm	250	300	400	500	500
Depth, cm	150	200	250	300	300
Each	**72.00**	**96.00**	**120.00**	**144.00**	**162.00**

Oven—Drying. Of heavy polished copper with extra sheet-iron bottom and mounted on enclosed bases or iron legs as desired; has tubulations for thermometer and thermo-regulator.

	No.	A	B	C	D
	Height, outside, cm	300	250	200	150
	Width, outside, cm	300	250	200	150
	Depth, outside, cm	400	300	250	200
16125	Each, with enclosed base	**45.50**	**24.00**	**19.00**	**15.00**
16126	Each, with iron legs	**44.00**	**22.50**	**17.50**	**13.50**



16130



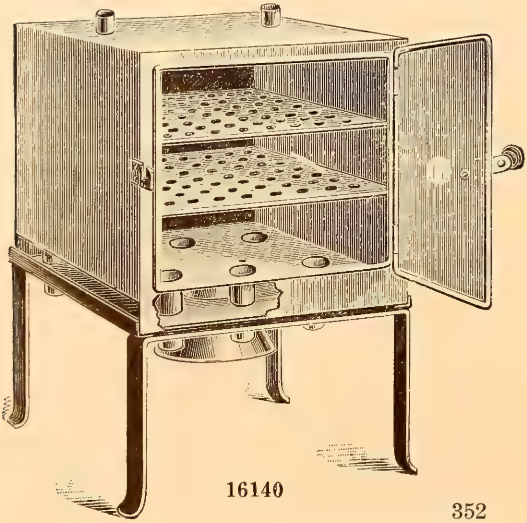
16135

Oven—Drying. With water bath top; made of heavy polished copper, with extra sheet-iron bottom for protection; tubulations provided for thermometer and thermo-regulator; mounted on enclosed bases or on iron legs, as desired.

		No. A	B	C	D
	Height, outside, cm	300	250	200	150
	Width, outside, cm	300	250	200	150
	Depth, outside, cm	400	300	250	200
16130	With enclosed base, each	**54.00**	**26.00**	**21.50**	**18.50**
16131	With iron legs, each	**51.00**	**24.50**	**20.00**	**17.25**

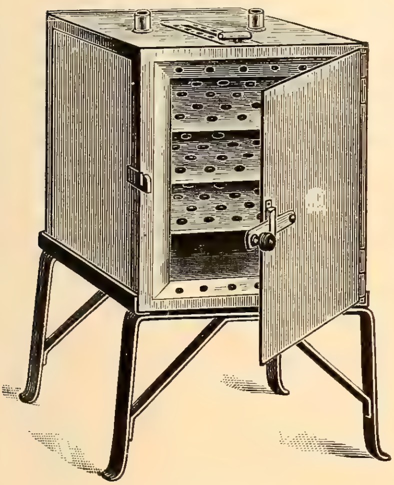
16135 **Ovens—Drying.** Single-wall; made of heavy polished copper, with extra sheet-iron bottom for protection; tubulations provided for thermometer and thermo-regulator; mounted on enclosed base or iron legs, as desired.

	No. A	B	C	D
Height, outside, cm	300	250	200	150
Width, outside, cm	300	250	200	150
Depth, outside, cm	400	300	250	200
With enclosed base, each	**33.50**	**16.00**	**12.00**	**10.00**
With iron legs, each	**32.00**	**14.50**	**10.50**	**8.75**

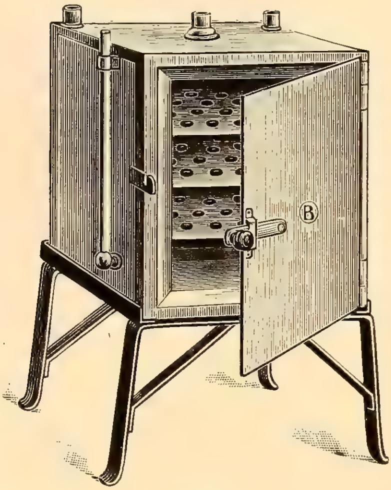


16140

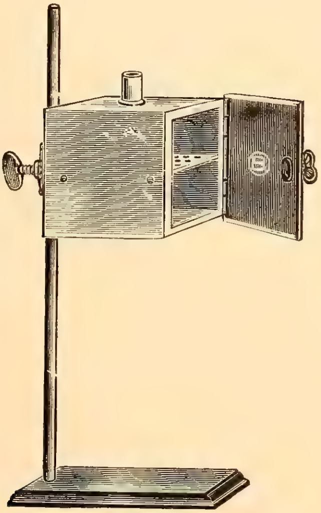
16140 Oven—Drying, Kaeler's. Constructed with single wall of polished copper, with double bottom; flame circulates between two bottoms and around the six connecting tubes, which when heated carry a current of hot air into interior oven and maintain even temperature; height, 25 cm; width, 31 cm; depth, 25 cm ______________Each **24.00**



16145

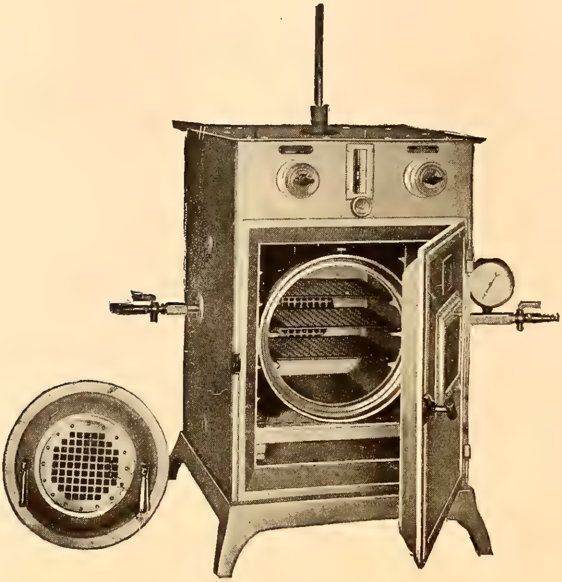


16150



16155

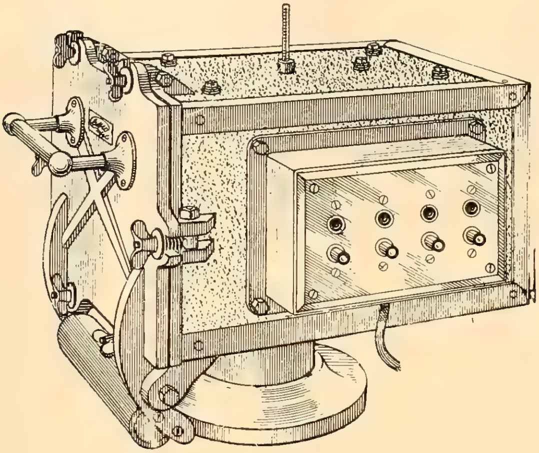
16145	**Oven—Drying.** Of heavy polished copper; double walls and door so constructed that heated air completely surrounds inner chamber; furnished with tubulations for thermometer and gas regulator, three shelves and sliding damper; mounted on a strong support; height, 28 cm; width, 25 cm; depth, 20 cm..........Each	36.00
16150	**Oven—Drying.** Has double walls of heavy polished copper and openings for water, thermometer and gas regulator; provided with water gauge and three shelves and mounted on strong support; inside dimensions: height, 28 cm; width, 25 cm; depth, 20 cm..........Each	40.00
16155	**Oven, Drying—Haematological.** Intended to meet the requirements of blood work, where cover glass specimen should be fixed by dry heat; made of copper and attached to small support stand, upon which it is adjustable for height; dimensions: height, 10 cm; width, 10 cm; depth, 10 cm..........Each	5.50



16160-A

16160 Ovens—Drying—Vacuum—Freas' Electric. Constant temperature, electric oven, constructed, heated and regulated upon same principles as the regular Freas oven, No. 16000; vacuum chamber, made of heavy cast bronze, is firmly supported in chamber of oven proper and provided with racks for shelves, with connections for vacuum and for passing stream of warm air, hydrogen or other reducing gases through chamber; front, on which rests the door, is heavily reenforced, as is the door, to give substantial bearing and produce perfect vacuum-tight connection; central part of door and back of chamber are constructed of a cast grid, on which rests a mica plate, made vacuum-tight with its frame, thus allowing inspection of vacuum chamber by means of electric lamp at back of oven beyond vacuum chamber; ground surfaces of the vacuum chamber and its door, in the small size oven, are held together by sturdy spring clips until vacuum pump is started, the reduced pressure then holding the door in a very firm and air-tight condition; this construction allows instant removal of the door and permits bearing surfaces to be easily and accurately reground, in case of need, by simply revolving the door by means of two handles provided thereon; door of large size oven can be rotated in a swivel holder, which swings on the hinges; vacuum chamber of small size oven is provided with four perforated metal shelves; oven proper is provided with two perforated aluminum shelves and equipped with cast aluminum racks, permitting shelves to be placed at any height desired when vacuum chamber is removed; vacuum chamber of large size oven is provided with cast ribs on the sides to accommodate up to ten shelves, six being furnished; this oven, because of its substantial construction, comparatively large size and satisfactory operation, is the one regularly used in large fertilizer, food, powder and similar laboratories.

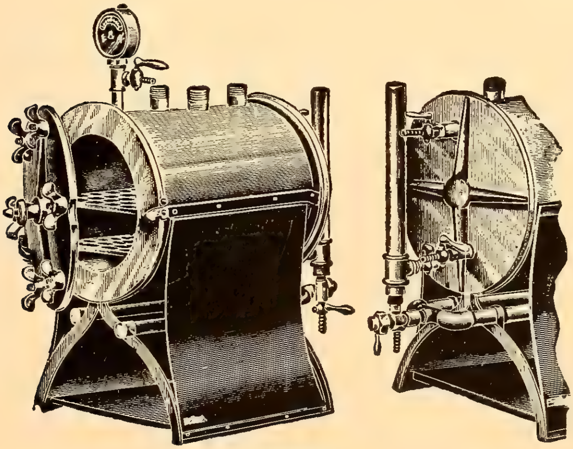
		No. A	B
	Size	Small	Large
	Dimensions, oven chamber, inside, cm	30 x 30 x 30	30 x 30 x 70
	Dimensions, vacuum chamber, inside, cm	23 x 23 x 23	20 x 20 x 70
	Each	**230.00**	**325.00**
16161	**Vacuum Chamber only:**		
	Each	**120.00**	**175.00**



16165

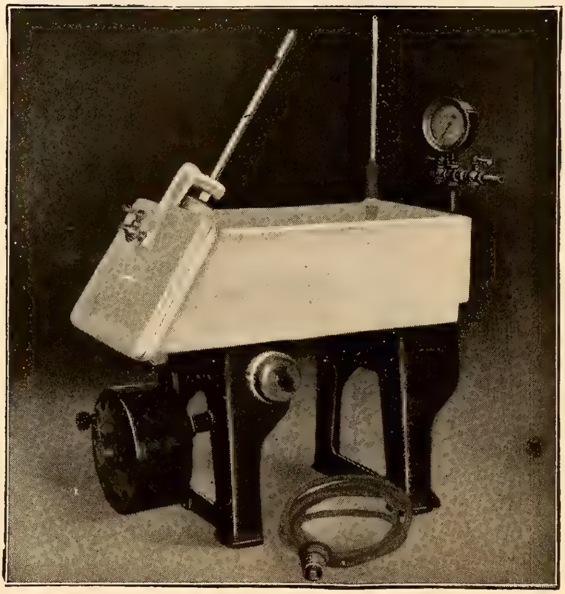
16165 Oven—Drying—Vacuum—Electric. For drying or sterilizing; made of cast-iron, very heavy, covered with transite; brass trimmed, provided with single shelf; electric heater consists of eight resistance coils, 1½ amperes, four on floor and four fastened to ceiling of oven; each two units are controlled by each pair of buttons shown on side, four heats being thus provided; there are six openings on top, in any of which a gauge may be placed, leaving other for insertion of thermeters; thus temperature at all points may be checked up when required -- Each **210.00**

(Please state Voltage and Current when ordering)



16168

16168 Oven—Drying—Vacuum—Heavy Type. For pressure up to 30 lbs.; inside dimensions, 40 x 20 cm, diameter; will hold vacuum, 30″; used by Bureau of Chemistry, U. S. Department of Agriculture, sugar laboratories and elsewhere; made of heavy seamless brass tubes, with 1-in. steam space; door, front and rear ends are heavy brass castings; mounted on strong, heavy stand of black iron, enclosed with polished American ingot iron; provided with pressure and vacuum gauge, also with opening for filling and constant water level device --Each **265.00**

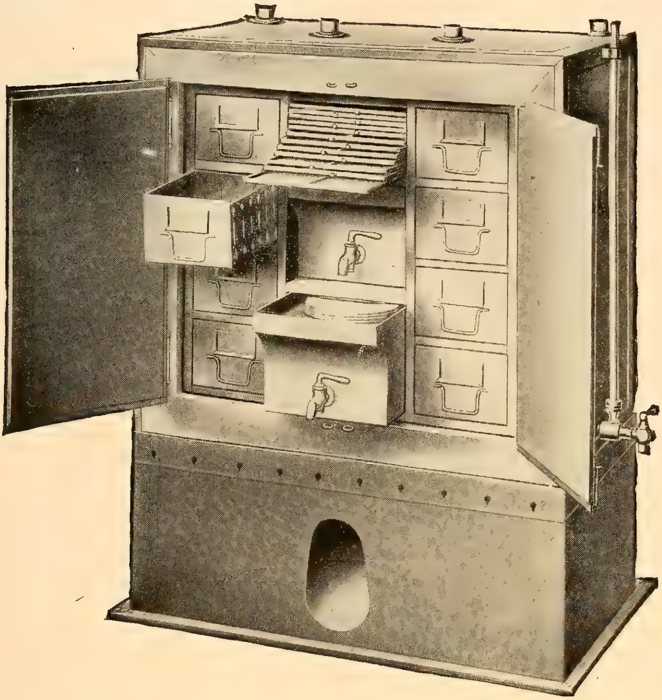


16170

16172

16173

16170	**Oven—Vacuum.** Maintains fixed temperature from 40° to 180°C; simply but ruggedly constructed; suitable for research as well as laboratory operations; drys nearly any substance without risk of decomposing; will safely dry explosive or inflammable material; heat is applied by direct contact, making possible very rapid drying; may be used as air drying oven by opening vent cock upon door, or by opening door wide, as a hot plate for evaporation or other purposes; height from table top to heating plate, 11 in.; desk space, 10 x 19 in.; vacuum oven dimensions, inside, above heating plate, 7 x 15 x 3½ in. high; arranged for 110 and 220 volts, alternating or direct current; furnished complete with rheostat, snap switch, extension cord and plugs, one 250° centigrade thermometer, one thermometer holder, one vacuum gauge, cocks for releasing and applying vacuum___Each	**115.00**
	(Please state Voltage and Current when ordering)	
16171	**Oven—Vacuum.** Same as No. 16170 above, but 8 in. high________Each	**135.00**
	(Please state Voltage and Current when ordering)	
16172	**Oven Thermometer—Mercury Well.** For thermometer of No. 16170 when used inside vacuum oven; of brass, nickel-plated; length 2 in.; height, 1 in.; width, ¾ in.; inside diameter mercury well, 5/16 in. ______________________________________Each	**.30**
16173	**Oven Thermometer—Glass.** Graduated in steps of one degree from 20 to 250 degrees, centigrade; length, 14 in.; made to fit Vacuum Oven No. 16170 ______________________________________Each	**1.75**



16175

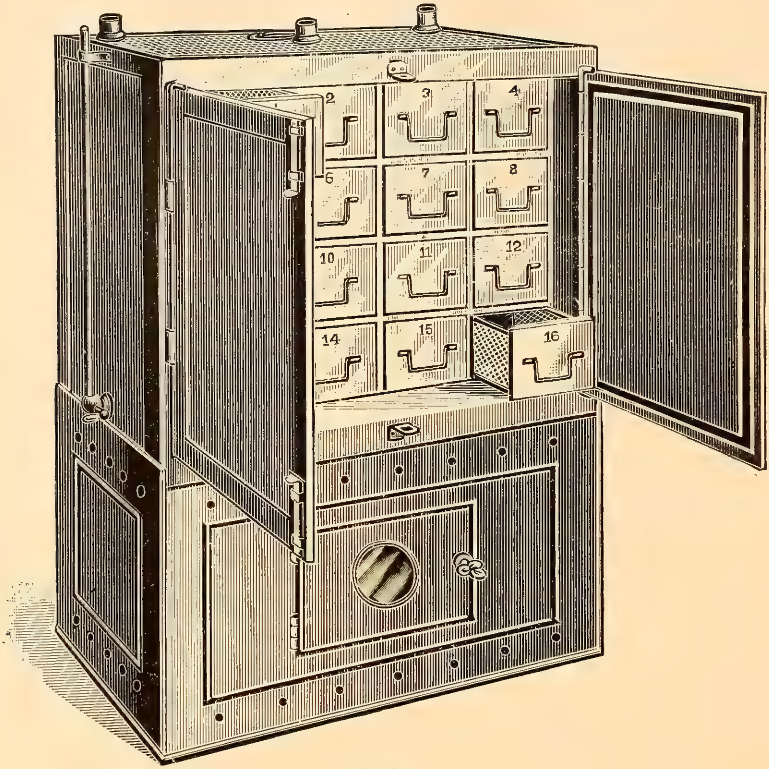
16175 **Oven—Paraffin Embedding and Water Bath.** Modification of Dr. Lillie's imbedding oven; constructed throughout of heavy copper, coated with a non-conducting water-proof material which assists in maintenance of an even temperature, protects the metal and makes interior of bath easily cleaned; base is of wrought iron and covered with sheet iron for protection of the flame from draughts; the eight drawers are of copper, separated by cross partitions, and arranged in two rows, the sides and back being of perforated zinc to permit free circulation of warm air through all compartments; furnished with two receptacles with screw-tops and stop-cocks, twelve perforated trays above receptacles, water gauge with stop-cock and tubulations for thermometer, thermostat and filling; for gas, but without equipment; inside dimensions: height, 63 cm; width, 58 cm; depth, 40 cm ---------- Each **218.00**

16176 **Oven—Paraffin Embedding and Water Bath.** Same as No. 16175 above, but with equipment consisting of 2-flame Bunsen burner, Reichert's thermo-regulator, thermometer graduated to 150°C and 6 feet of metallic tubing ---------- Each **227.00**

16177 **Oven—Paraffin Embedding and Water Bath.** Same as No. 16175 above, but with electric equipment ---------- Each **315.00**

(Please state Voltage and Current when ordering)

Paraffin of Any Melting Point Furnished



16180

16180 **Oven—Paraffin Embedding.** This is the original form of water bath, and is especially adapted to class work, since each student may be assigned a drawer and carry on his work independently of the other members of the class; for gas, with no equipment.

No.	A	B	C
Width inside, cm	67	46	23
No. of tiers	6	4	2
No. of trays	24	16	8
Each	**187.00**	**147.00**	**103.00**

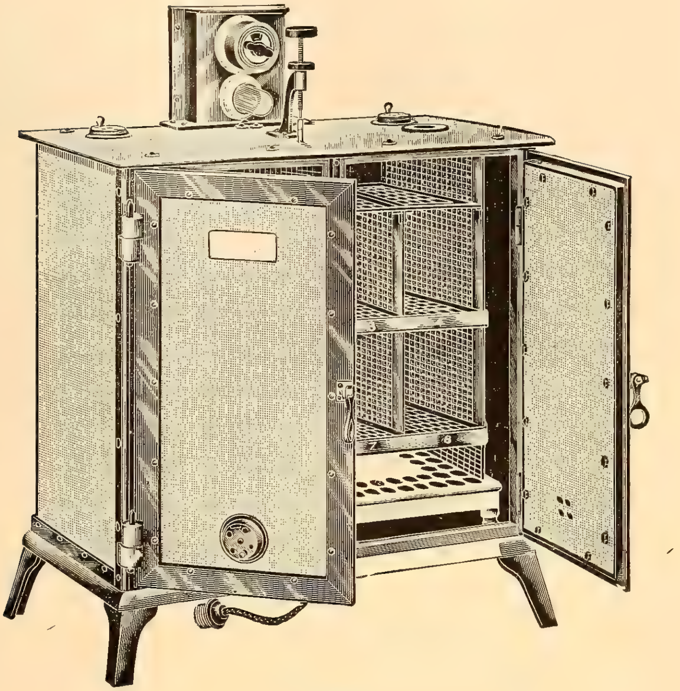
16181 **Oven—Paraffin Embedding.** Same as No. 16180 above, but equipment consisting of 2-flame Bunsen burner, Reichert's thermo-regulator, thermometer graduated to 150°C and 6 feet of metallic tubing.

No.	A	B	C
Width inside, cm	67	46	23
No. of tiers	6	4	2
No. of trays	24	16	8
Each	**195.50**	**155.50**	**111.50**

16182 **Oven—Paraffin Embedding.** Same as No. 16180 above, but with electric equipment.

No.	A	B	C
Width inside, cm	67	46	23
No. of tiers	6	4	2
No. of trays	24	16	8
Each	**277.50**	**243.50**	**187.50**

(Please state Voltage and Current when ordering)



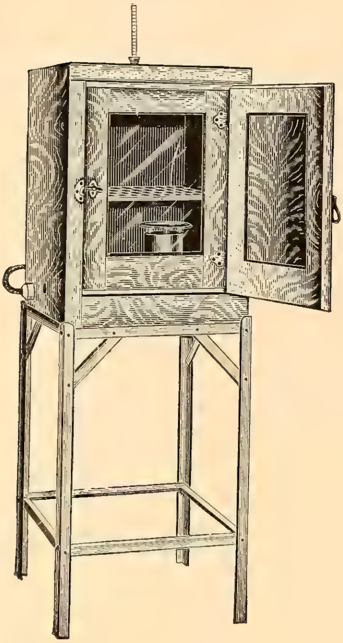
16190

16190 Oven—Paraffin Compartment, Thelco. Constructed of asbestos wood, with double walls packed between with insulating material; frame is heavy aluminum casting, which makes oven non-corrosive and very substantial; compartment arrangement, divided into eight numbered compartments, each 102 x 127 x 152 mm deep, is made of perforated sheet aluminum, supported 51 mm above heating plate to allow good circulation of heated air; eight shelves are provided for purpose of drying slides, etc.; heating element, consisting of resistance wire wound on an insulated plate of asbestos wood, is easily removable in case of need; bimetallic regulating device, of special design, is self-contained and operated from outside of oven as illustrated; will maintain temperature constant within 1°, from room temperature to 65°C------------------------------------Each 101.50

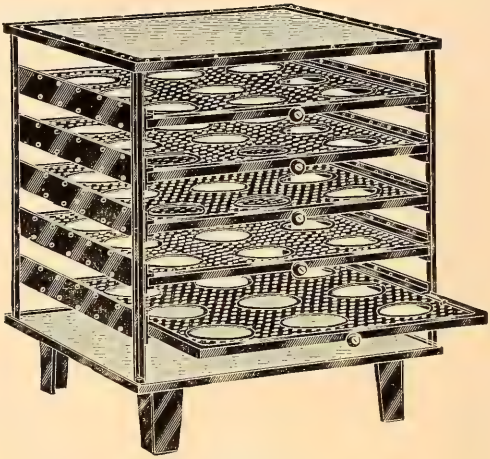
(Please specify Voltage and Current when ordering)

DISTILLED WATER

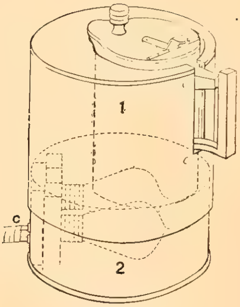
We publish a special booklet entitled "Water Stills." This is a compendium of Stills and important information on water distillation. We will gladly send a copy.



16195



16200



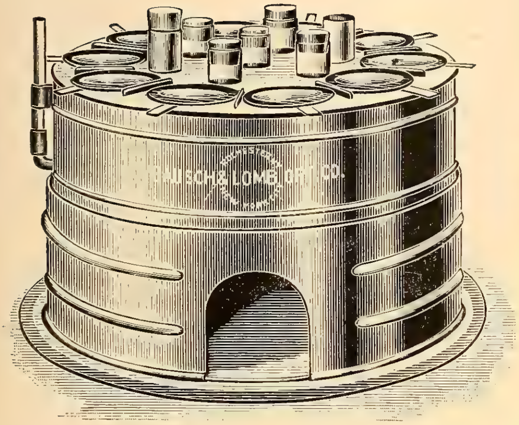
16205

16195 **Ovens—Paraffin Embedding.** Of same construction as Incubators Nos. 13695 and 13705, but fitted with higher temperature heating units to meet requirements of paraffin embedding, or for temperature of 56°C.

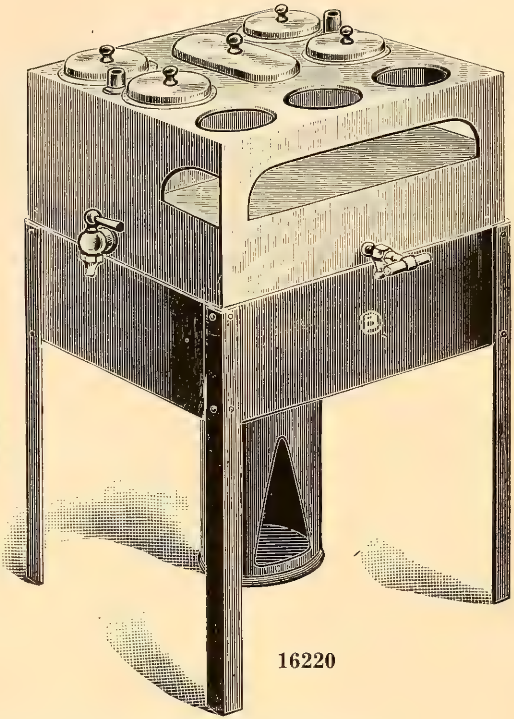
No.	A	B	C	D
Height, inside, cm	31	38	66	76
Width, inside, cm	23	31	46	51
Depth, inside, cm	23	31	46	46
Without stand, each	**35.00**	**54.00**	**86.50**	**105.00**
With stand, each			**99.00**	**117.50**

16200 **Paraffin Receptacle.** For use in Paraffin Oven No. 16195; outside dimensions: height, 38 cm; width, 36 cm; depth, 36 cm; constructed of steel; when purchased separately is furnished with 8 cm legs of same material; top and bottom are of transite, ½ cm in thickness; furnished with five shelves of perforated metal, each shelf having nine holes, 6 cm in diameter, for receiving metal cups used in paraffin work; cups measure 6 cm in diameter by 14 cm in depth and are included with outfit____Each **50.00**

16205 **Paraffin Melting Oven—Kingsbury's.** Well insulated by asbestos; upper part contains covered pitcher for the paraffin; lower part has two incandescent lamps and supply cable; one or both lamps can be used, depending on the temperature of the room_______________Each **20.00**



16210



16220

16210 **Paraffin Bath—Laboratory.** Designed for use of students, or in other cases where a number of sections are to be embedded at once; made of heavy copper, circular in form, with an extra sheet-iron bottom to prevent its burning out; base is of sheet-iron and not only supports the bath but protects the flame, assisting in maintaining even temperature; has ten large cups, seven being deep, 65 mm diameter by 40 mm deep, and three shallow, watchglass shape, 65 mm diameter by 20 mm deep, also 5 tubulations in top for glass tubes and tubulations for thermometer and gas regulator; furnished with asbestos mat; can be used with kerosene lamp if necessary; water chamber: diameter, 32 cm; depth, 9 cm; for gas, with no accessories------Each **25.50**

16215 **Paraffin Bath—Laboratory.** Same as No. 16210 above, but with accessories consisting of Bunsen micro burner, Reichert thermo-regulator, thermometer graduated to 100°C and 6 feet of rubber tubing--Each **31.25**

16220 **Paraffin Bath—Coplin's.** Supplied with four cups, 8 cm in diameter by 10 cm deep, and one larger central reservoir, 18 x 8 x 10 cm deep, which is provided with stop-cock to draw off the melted paraffin; has three spaces in front for heating material placed in glass vessels such as tall form Stender dishes; provided with valve for drawing off the water, cylindrical shield for the gas flame and tubulations for the thermometer and gas regulator; for gas, with no equipment.

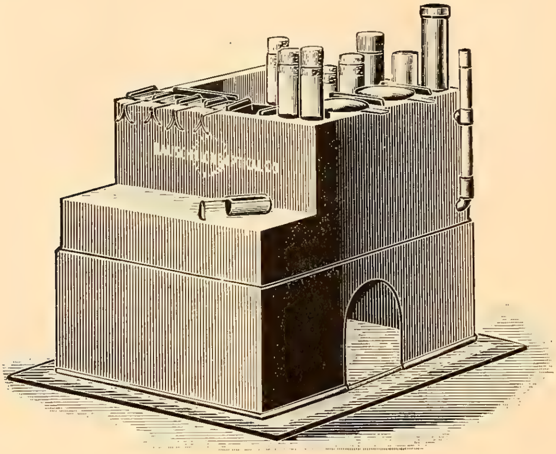
Outside Dimensions.

	No. A	B
Height, cm	58	58
Width, cm	31	31
Depth, cm	61	31
Each	**67.50**	**45.00**

16225 **Paraffin Bath—Coplin's.** Same as No. 16220 above, but with gas accessories.

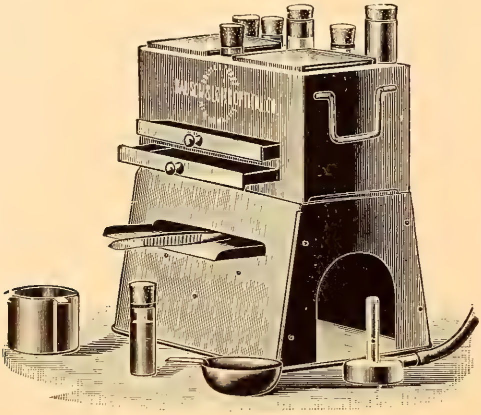
Outside Dimensions.

	No. A	B
Height, cm	58	58
Width, cm	31	31
Depth, cm	61	31
Each	**73.25**	**50.25**



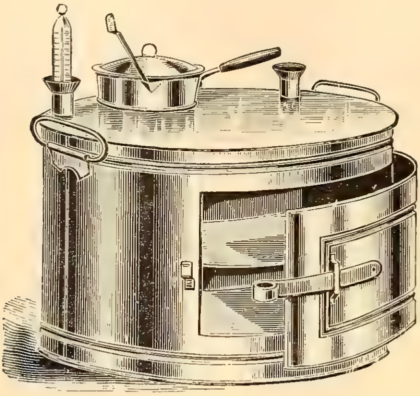
16230 **Paraffin Bath—Naples'.** Intended for the most precise work, especially various sorts of imbedding, digestions and preparation of culture media; constructed of copper, with false bottom; mounted on a sheet-iron base; receptacles include two large cups for stock paraffin, five embedding pans with supports to prevent their overturning, a drying chamber under the embedding chamber which opens at the side of bath, and a warming table 7 x 23 cm in front of bath; has one deep cup, 65 mm by 40 mm deep and one of watchglass shape, 65 x 20 mm; embedding chamber: length, 14 cm; width, 10 cm; for gas, with no accessories Each **32.00**

16235 **Paraffin Bath—Naples'.** Same as No. 16230 above, but with accessories consisting of Bunsen micro burner, Reichert thermo-regulator, thermometer graduated to 100°C and 6 feet of rubber tubing Each **37.75**



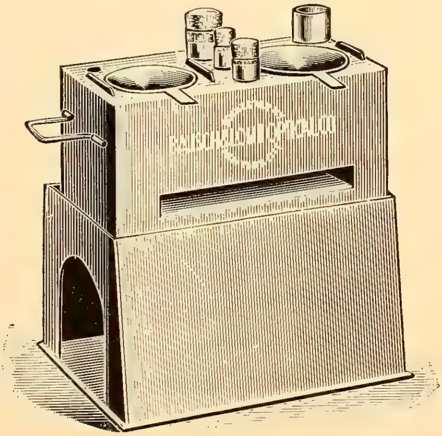
16230 **Paraffin Bath—Miller's.** Designed especially for Histological work and has two cups, one of which is watchglass shape, 65 by 20 mm, and one 65 mm by 40 mm deep; furnished with two drawers holding six slides each and shelf for warming instruments; constructed of polished copper with a sheet iron false bottom against which the flame strikes; water chamber: length, 20 cm; width, 10 cm; depth, 10 cm; for gas, with no accessories Each **18.50**

16235 **Paraffin Bath—Miller's.** Same as No. 16230 above, but with accessories, consisting of Bunsen micro burner, Reichert thermo-regulator, thermometer graduated to 100°C and 6 feet of rubber tubing Each **24.25**



16250

16250 **Paraffin Bath and Drying Oven—Reeve's.** Made of very heavy copper and mounted on sheet-iron base, not illustrated; has a removable shelf; contains stock paraffin cup of 500 cc capacity with object lifter, cover and handle; outside dimensions: height, 22 cm; diameter, 26 cm; drying oven: height, 13 cm; width, 17 cm; depth, 15 cm__Each **32.00**

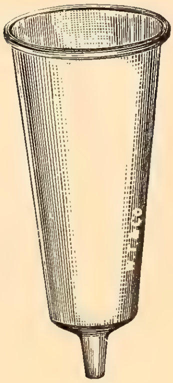


16255

16255 **Paraffin Bath—Simple.** Intended for use of individuals or for laboratories where a comparatively small amount of embedding is done; has two embedding cups, one 65 mm diameter by 40 mm deep, and one 65 mm by 20 mm, as well as shelf for watchglass imbedding and warming instruments; mounted on sheet-iron base; outside dimensions: length, 18 cm; width, 9 cm; depth, 9 cm; for gas, with no accessories ____Each **12.00**

16260 **Paraffin Bath—Simple.** Same as No. 16255 above, but with accessories consisting of Bunsen burner, Reichert thermo-regulator, thermometer graduated to 100°C and 6 feet of rubber tubing___Each **17.50**

16277



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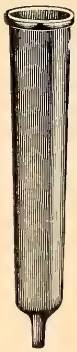
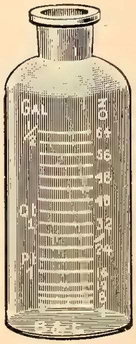


4590



4595

16265 **Paper—Parchment, Vegetable.** For dialysers, etc.........Per pound .50
(Animal Parchment—prices on application)

16270 **Paper—Tracing.** Very thin, transparent and tough; size, 50 x 68 cm ....Per quire 4.00

16275 **Pencils—Litmus, Tyree's.** Red and blue; in metal case.........Each .30

16277 **Pencils—Wax, Blaisdell's.** For writing on glass, china, metal, etc.; white ....Each .12

16282 **Pencils—Wax, Blaisdell's.** For writing on glass, china, metal, etc.; blue ....Each .12

16284 **Pencils—Wax, Blaisdell's.** For writing on glass, china, metal, etc.; red ....Each .12

16286 **Pencils—Wax, Blaisdell's.** For writing on glass, china, metal, etc.; yellow ....Each .12

4585 **Percolators—Conical.** Of heavy flint glass.

No.	A	B	C	D	E
Capacity, oz.	8	16	32	64	gal. 1
Each	.50	.65	.75	1.00	1.40
No.	F	G	H	I	J
Capacity, gal.	1½	2	3	4	5
Each	2.25	2.75	4.75	7.00	9.50

4590 **Percolators—Oldberg's.** Of heavy flint glass.

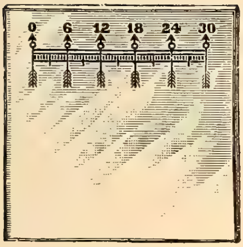
No.	A	B	C	D	E	F
Capacity, oz.	4	8	16	24	32	40
Each	.50	.55	.60	.70	.95	1.15
No.	G	H	I	J	K	L
Capacity, gal.	½	¾	1	1½	2	3
Each	1.35	1.50	2.20	2.60	4.25	5.60

4595 **Percolator Jars.** Graduated in ounces.

No.	A	B	C	D	E
Capacity, oz.	16	32	64	128	256
Each	1.00	1.20	2.10	3.00	4.80

4600 **Percolator Jars.** Of bottle shape; graduated in the metric system.

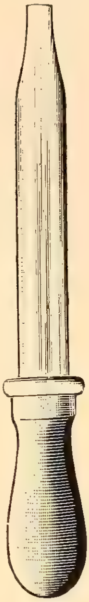
No.	A	B	C	D
Sapacity, liters	1	2	4	8
Each	1.20	2.10	3.00	4.80



16290

4640

4645



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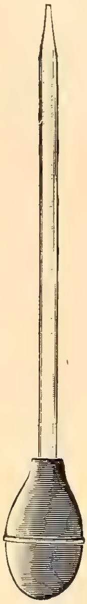


4660

4655

4665

4670

16290 **Pill Tiles—Porcelain.** Graduated; square.

No.	A	B
Size, mm	200	250
Each	1.00	1.50

16295 **Pipe—Block Tin.**

No.	A	B	C	D	E
Diameter, mm	5	6	8	9	12
Per pound	1.50	1.50	1.50	1.50	1.50

16300 **Pipe—Lead.**

No.	A	B	C	D	E
Diameter, mm	5	6	8	9	12
Per pound	.30	.30	.30	.30	.30

4640 **Pipettes—Dropping.** With rubber bulb; capacity, 2 cc; straight, Per dozen .30

4645 **Pipettes—Dropping.** Same as No. 4640 above, but with curved tip ---------- Per dozen .30

4650 **Pipettes—Dropping.** With glass tube of large bore and extra large rubber bulb; suitable for removing large pieces of sediment, small embryos, etc. ---------- Per dozen .42

4655 **Pipettes—Dropping.** Without bulb; straight.

No.	A	B
Length, mm	200	300
Per dozen	.55	.85

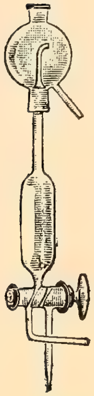
4660 **Pipettes—Dropping.** Same as No. 4655 above, but with rubber bulb of about 20 cc capacity.

No.	A	B
Length, mm	200	300
Each	.25	.25

4665 **Pipettes—Volumetric.** Straight form; graduated in minims; with rubber bulb.

No.	A	B
Capacity, minims	30	60
Each	.25	.30

4670 **Pipette—Dropping—Comer Automatic.** With overflow and rubber bulb; capacity, 1 cc; very convenient for filling ampoules with repeated doses of 1 cc ---------- Each 1.58



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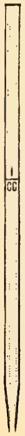
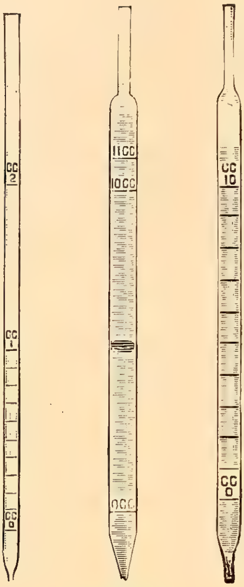


4680



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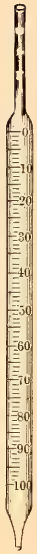


4690

4675 Pipettes—Automatic. With overflow; fitted with three-way stop-cock.

No.	A	B	C	D	E
Capacity, cc	10	15	25	50	100
Each	4.00	4.50	5.00	5.50	6.50

4680 Pipettes—Volumetric or Transfer. Straight form; for use in bacteriological work, water analysis, etc.; with one mark only; without bulb.

No.	A	B	C	D	E	F
Capacity, cc	1	2	3	4	5	10
Each	.15	.15	.15	.15	.15	.17

4685 Pipettes—Graduated. Designed particularly for use in water analysis and so used in the Hygienic Laboratory of the U. S. Public Health Service; the 2 cc Pipette is graduated from 0 to 1 cc in 1/10 cc divisions and is ungraduated from the 1 cc mark to 2 cc; the 10 cc Pipette is graduated from 0 to 10 cc in single cc; the 11 cc Pipette has marks at 0, 10 and 11 cc only.

No.	A	B	C
Capacity, cc	2	10	11
Each	.40	.40	.40

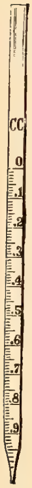
4690 Pipettes—Mohr's. Accurately graduated in metric system, at 20° C.

No.	A	B	C	D	E	F
Capacity, cc	1/10	1/10	2/10	2/10	2/10	1/10
Graduated, cc	1/1000	1/100	1/1000	1/100	1/50	1/100
Each	.50	.35	.70	.35	.35	.35

No.	G	H	I	J	K	L
Capacity, cc	1	1	1	2	2	2
Graduated, cc	1/100	1/50	1/10	1/100	1/50	1/20
Each	.45	.40	.35	.50	.45	.40

No.	M	N	O	P	Q	R
Capacity, cc	2	3	5	5	5	10
Graduated, cc	1/10	1/100	1/20	1/10	1	1/20
Each	.35	.60	.45	.40	.25	.50

No.	S	T	U	V	W	X
Capacity, cc	10	10	25	50	75	100
Graduated, cc	1/10	1/2	1/10	1/10	1/5	1/5
Each	.45	.35	.60	1.00	1.25	1.50



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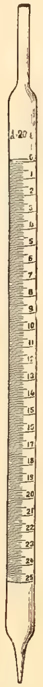

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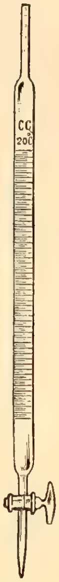

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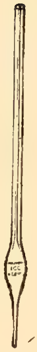


4712

4695 Pipettes—Mohr's Serological. Same as No. 4690 above, but graduated to extreme tip.

No.	A	B	C	D	E
Capacity, cc	1/10	1	1	1	2
Graduated, cc	1/100	1/100	1/50	1/10	1/50
Each	.35	.45	.40	.35	.45

No.	F	G	H	I	J
Capacity, cc	2	2	5	5	10
Graduated, cc	1/20	1/10	1/20	1/10	1/20
Each	.40	.35	.45	.40	.50

No.	K	L	M	N	O
Capacity, cc	10	25	50	75	100
Graduated, cc	1/10	1/10	1/10	1/5	1/5
Each	.45	.60	1.00	1.25	1.50

4700 Pipettes—Precision, Mohr's. Graduated at 20° C, to meet requirements of the U. S. Bureau of Standards.

No.	A	B	C	D	E	F
Capacity, cc	1	2	5	10	25	50
Graduated, cc	1/100	1/50	1/20	1/10	1/10	1/5
Each	1.80	2.00	2.40	2.40	3.35	4.50

4705 Pipettes—Mohr's. Graduated at 20° C, to meet requirements of the U. S. Bureau of Standards; with control stamp and official certificate of corrections.

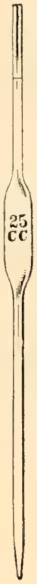
No.	A	B	C	D	E	F
Capacity, cc	1	2	5	10	25	50
Graduated, cc	1/100	1/50	1/20	1/10	1/10	1/5
Each	5.00	5.35	6.00	6.00	7.50	8.00

4710 Pipettes—Mohr's . Same as No. 4700 above, but with glass stopcock.

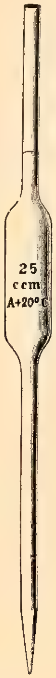
No.	A	B	C	D
Capacity, cc	10	25	50	100
Graduated, cc	1/10	1/10	1/10	1/5
Each	1.60	1.80	2.00	2.50

4712 Pipettes, Ostwald-Folin. Graduated to deliver at 20°C.

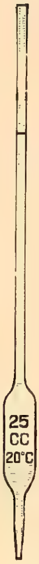
No.	A	B	C	D
Capacity, cc	½	1	2	3
Each	1.20	1.50	1.60	1.75



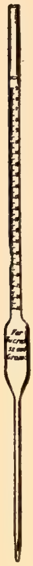
4715



4718-20



4725



4730

4715 **Pipettes—Volumetric or Transfer.** With glass bulb in middle of tube; accurately graduated to capacities named.

No.	A	B	C	D	E	F	G
Capacity, cc	1	2	3	4	5	5.3	7.5
Each	**.15**	**.15**	**.15**	**.15**	**.15**	**.15**	**.16**
No.	**H**	**I**	**J**	**K**	**L**	**M**	**N**
Capacty, cc	8	10	12.5	15	18	20	25
Each	**.16**	**.17**	**.22**	**.24**	**.26**	**.26**	**.28**
No.	**O**	**P**	**Q**	**R**	**S**	**T**	**U**
Capacity, cc	30	40	50	75	100	200	250
Each	**.30**	**.35**	**.35**	**.45**	**.50**	**.60**	**.70**

4718 **Pipettes—Volumetric or Transfer, Precision.** Graduated at 20° C, to meet requirements of the U. S. Bureau of Standards.

No.	A	B	C	D	E	F
Capacity, cc	1	5	10	25	50	100
Each	**.80**	**1.00**	**1.20**	**1.40**	**1.60**	**2.20**

4720 **Pipettes—Volumetric or Transfer, Precision.** Graduated at 20° C, to meet requirements of the U. S. Bureau of Standards; with control stamp and official certificate of correction.

No.	A	B	C	D	E	F
Capacity, cc	1	5	10	25	50	100
Each	**2.50**	**2.65**	**2.80**	**3.00**	**3.50**	**4.50**

4725 **Pipettes—Volumetric or Transfer.** With glass bulb low on tube; accurately graduated to capacities named.

No.	A	B	C	D	E	F	G
Capacity, cc	1	2	5	10	20	25	50
Each	**.15**	**.15**	**.15**	**.17**	**.26**	**.28**	**.35**

4730 **Pipette—Volumetric, Glucose—Spencer's.** With Brix scale, graduated from 5 to 20°; divisions, 1/5°; capacity, 50 cc ________________Each **3.00**

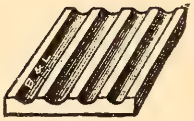
4735 **Pipette—Spencer's.** For sucrose; with Brix scale, graduated from 5 to 20°; divisions, 1/10; capacity, 52.096 cc ________________________Each **3.50**

4740 **Pipette—Spencer's.** Same as No. 4735 above, but with capacity of 50 cc ____Each **3.50**

16310

16312

16315



5825

Pipette Boxes. For sterilizing pipettes.

	No.	A	B	C	D	E	F
	Height, cm	38	25	32	32	31	42
	Width, cm	5	7 x 5	7 x 5	8 x 8	10 x 10	7 x 5
16310	Polished Copper	2.40	3.00	3.20	3.40	3.60	3.60
16312	Sheet Iron	2.00	1.80	2.00	2.20	2.40	2.40

16315	**Pipette Boxes.** Nickel-plated, asbestos-lined; inside dimensions, 40 x 110 cm	Each	16.00
5825	**Pipette Rest.** Of Ohio porcelain	Each	.60

Pipette Stands, see page 440.

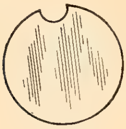
16320-25

16320 **Plates—Glass, Circular.** Plain or ground on one side; edges not ground.

No.	A	B	C	D	E
Diameter, mm	50	75	100	125	150
Each	.04	.05	.08	.10	.12
No.	**F**	**G**	**H**	**I**	**J**
Diameter, mm	175	200	225	250	300
Each	.16	.20	.25	.30	.40

16325 **Plates—Glass, Circular.** Edges ground.

No.	A	B	C	D	E
Diameter, mm	50	75	100	125	150
Each	.05	.06	.10	.13	.15
No.	**F**	**G**	**H**	**I**	**J**
Diameter, mm	175	200	225	250	300
Each	.20	.25	.30	.35	.45



16330

16335

16340

16330 **Plates—Glass, Circular.** With ground edge, and piece cut out of edge to admit stirrer.

No.	A	B	C	D	E
Diameter, mm	50	75	100	125	150
Each	.30	.35	.40	.45	.50

16335 **Plates—Glass, Circular.** With ground edges, and hole in center to admit stirrer.

No.	A	B	C	D	E
Diameter, mm	50	75	100	125	150
Each	.30	.35	.40	.45	.50

16340 **Plates—Glass, Square.** Plain; edges not ground.

No.	A	B	C	D	E
Size, mm	70	100	125	150	175
Each	.04	.07	.08	.10	.14

No.	F	G	H	I
Size, mm	200	225	250	300
Each	.18	.22	.27	.32

16345 **Plates—Glass, Square.** Ground on one side.

No.	A	B	C	D	E
Size, mm	70	100	125	150	175
Each	.05	.09	.11	.13	.18

No.	F	G	H	I
Size, mm	200	225	250	300
Each	.23	.27	.32	.40

16348 **Plates—Glass, Square.** Heavy plate; ground on one side; edges rough.

No.	A	B	C	D	E
Size, mm	70	100	125	150	175
Each	.25	.30	.40	.50	.70

No.	F	G	H	I
Size, mm	200	225	250	300
Each	1.20	1.50	1.75	2.25

16350 **Plates—Glass, Square.** Heavy plate; ground on one side; edges ground.

No.	A	B	C	D	E
Size, mm	70	100	125	150	175
Each	.30	.35	.45	.60	.80

No.	F	G	H	I
Size, mm	200	225	250	300
Each	1.35	1.70	1.90	2.40

16355 **Plates—Blue Glass.** So-called Cobalt glass; for observing the potassium flame; edges not ground.

No.	A	B	C	D	E	F
Size, mm	50 x 50	50 x 75	75 x 75	50 x 100	75 x 100	100 x 100
Each	.06	.08	.12	.12	.15	.20

16360 **Plates—Blue Glass.** Same as above, but with edges ground.

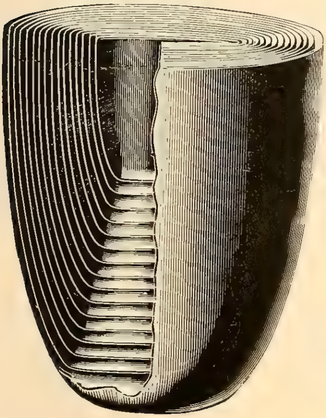
No.	A	B	C	D	E	F
Size, mm	50 x 50	50 x 75	75 x 75	50 x 100	75 x 100	100 x 100
Each	.10	.12	.18	.18	.22	.30

16365 **Plates—Ruby Glass.** Edges not ground.

No.	A	B	C	D	E	F
Size, mm	50 x 50	50 x 75	75 x 75	50 x 100	75 x 100	100 x 100
Each	.06	.08	.12	.12	.15	.20

16370 **Plates—Ruby Glass.** Edges ground.

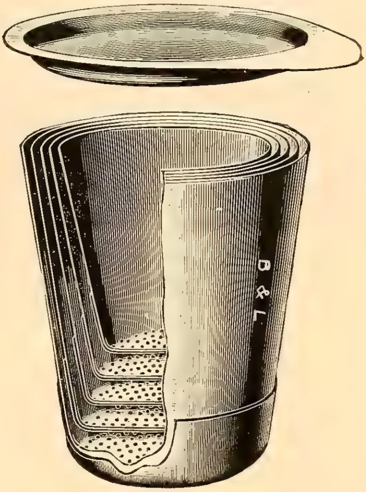
No.	A	B	C	D	E	F
Size, mm	50 x 50	50 x 75	75 x 75	50 x 100	75 x 100	100 x 100
Each	.10	.12	.18	.18	.22	.30



16375

5830

5935-40



16380

5830 **Plates—Color.** Of Coors porcelian; glazed throughout, with exception of bottom surface.

Size No.	1	2	3	4
Dimensions, mm	110 x 90	160 x 125	180 x 110	180 x 140
Number of depressions	12	12	24	30
Each	**.84**	**1.14**	**1.62**	**1.80**

5925 **Plates, Porous.** Of Coors porcelain; round.

Size No.	1	2	3
Diameter, mm	145	175	220
Thickness, mm	6	6	6
Each	**1.08**	**1.44**	**2.40**

5930 **Plates, Porous.** Of Ohio porcelain; unglazed; circular, flat.

Size No.	1	2	3
Diameter, mm	140	190	230
Each	**.90**	**1.20**	**2.00**

5935 **Plates, Porous.** Of Coors porcelain; dinner plate shape; for drying precipitates and crystals; diameter, 250 mm ---------------------Each **.54**

5940 **Plates, Porous.** Of Ohio porcelain; dinner plate shape.

Size No.	1	2
Diameter, mm	200	250
Per Dozen	**3.50**	**4.00**

5945 **Plates, Porous.** Of Coors porcelain; square.

Size No.	1	2
Length, mm	300	305
Width, mm	200	305
Thickness, mm	6	6½
Each	**3.60**	**4.80**

16375 **Platinum Crucibles.** Supplied with covers, unless otherwise ordered; weight, with covers, approximately as many grams as capacity in cc.

No.	A	B	C	D	E	F	G
Capacity, cc	8	10	12	15	20	25	30

Prices on application

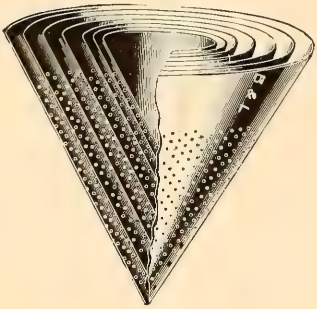
No.	H	I	J	K	L	M
Capacity, cc	35	40	45	50	55	60

Prices on application

16380 **Platinum Crucibles—Gooch Form.** Perforated; furnished with covers, unless otherwise ordered; weights given below include covers and caps.

No.	A	B	C	D	E
Capacity, cc	10	15	20	25	30
Weight, approx., grams	13	18	22	29	34

Prices on application



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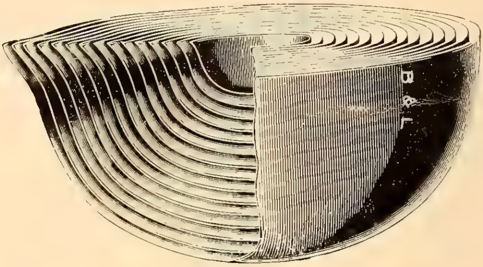

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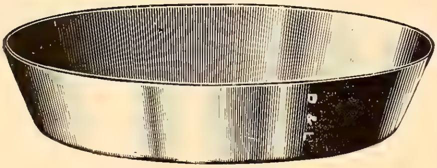

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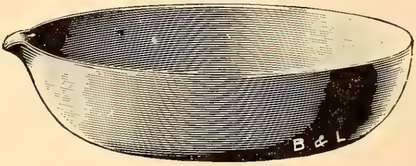

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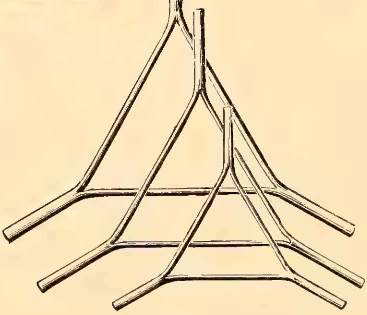


16415

16385 **Platinum Dishes—Evaporating.** With lip.

No.	A	B	C	D	E
Capacity, cc	20	30	45	80	125
Weight, approx., grams	8	14	22	32	48

Prices on application

No.	F	G	H	I
Capacity, cc	200	270	370	400
Weight, approx., grams	65	90	125	150

Prices on application

16390 **Platinum Dish.** For milk analysis; capacity, 45 cc; approximate weight, 17 grams ____Price on application

16395 **Platinum Dish.** For water analysis; capacity, 45 cc; approximate weight, 15 grams ______________________________________Price on application.

16400 **Platinum Dish.** Hammered; shallow; for water analysis; capacity, 100 cc; approximate weight, 20 grams________________________Price on application.

16405 **Platinum Filter Cones.** Seamless; perforated; angle, 60°.

No.	A	B	C	D	E	F	G
Diameter, mm	19	21	25	32	38	45	50
Weight, approx., grams	1	1.5	2.1	3.1	5.3	7.5	9.2

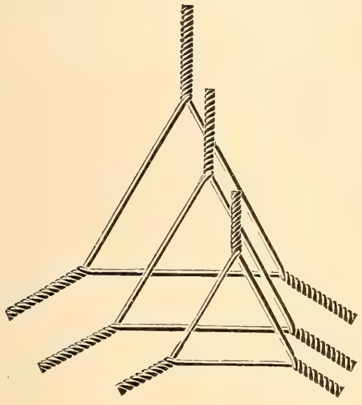
Prices on application.

16410 **Platinum Foil.** Any size or thickness; stock thicknesses, .01, .02, .03, .04, .05 and .06 mm ____________________________________Price on application.

16415 **Platinum Triangles.** Solid ends.

No.	A	B	C	D	E	F
For crucibles of capacity, cc	10	15	20	30	40	60
Weight, approximate, grams	5	8	11	12	15	18

Prices on application.



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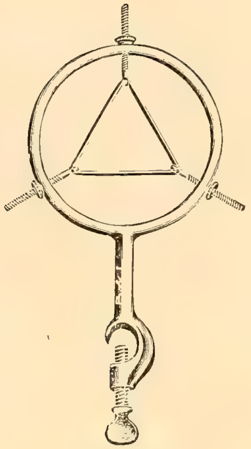


16425-30

16420 **Platinum Triangles.** Twisted ends.

No.	A	B	C	D	E	F
For crucibles of capacity, cc	10	15	20	30	40	60
Weight, approximate, grams	5	8	11	12	15	18

Prices on application.

16425 **Platinum Triangles.** To be used with holder, as illustrated; an economical form.

No.	A	B	C	D	E	F	G	H
For crucibles of capacity, cc	10	15	20	30	40	60	80	100
Weight, approximate, grams	2	2.5	2.5	5	7.5	8	9	10

Prices on application.

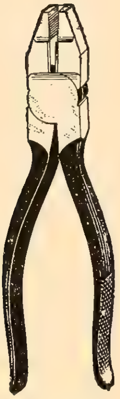
16430 **Holder.** For Platinum Triangles No. 16425 above; nickel-plated--Each **1.00**

16435 **Platinum Wire.** Brown and Sharpe gauge, of diameters and approximate weights indicated below.

Gauge No.	10	11	12	13	14	15	16
Diameter, in.	.106	.091	.081	.072	.064	.057	.051
Weight, approx., grams per foot	37.5	28.0	22.0	17.5	14.0	11.0	9.1
Gauge No.	17	18	19	20	21	22	
Diameter, in.	.045	.041	.036	.032	.029	.026	
Weight, approx., grams per foot	7.0	5.7	4.4	3.4	2.9	2.3	
Gauge No.	23	24	25	26	27	28	
Diameter, in.	.023	.020	.018	.016	.014	.013	
Weight, approx., grams per foot	1.8	1.4	1.1	0.9	0.7	0.6	
Gauge No.	29	30	31	32	33	34	35
Diameter, in.	.0115	.010	.009	.008	.007	.0063	.0056
Weight, approx., grams per foot	0.45	0.35	0.28	0.22	0.17	0.15	0.11

Prices on Application

**Palau, Rhotanium and other Platinum Substitutes
are obtainable from us.**



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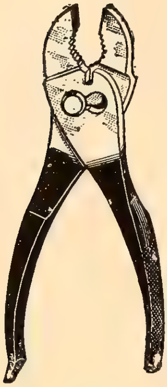

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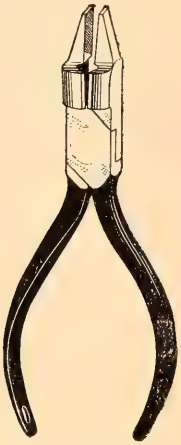


16450

16440 **Pliers—Side-Cutting.** Lap joint; with gun barrel handles, knurled; forged and tempered with utmost care.

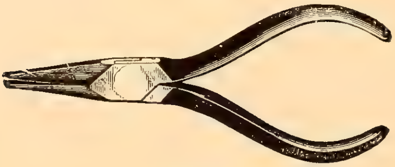
No.	A	B	C	D	E
Length, in.	4	5	6	7	8
Each	1.40	1.50	1.60	1.90	2.10

16445 **Pliers—Combination.** Slip-joint; with gun barrel handles, knurled; slip-joint design, permitting wider opening of burner jaws, is advantageous in general use.

No.	A	B	C
Length, in.	6	8	10
Each	1.00	1.30	1.55

16450 **Pliers.** **Lap-joint;** with gun barrel handles, raised jaws and slender, flat nose.

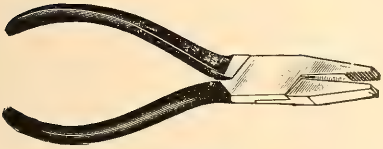
No.	A	B	C
Length, in.	4	4½	5
Each	1.35	1.40	1.55



16455

16455 **Pliers—Chain-Nose.** Lap-joint; with gun barrel handles; made of fine steel, carefully forged and tempered; very useful for getting into small openings.

No.	A	B
Length, in.	4	4½
Each	.95	.95



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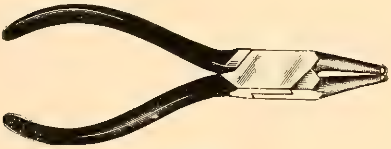


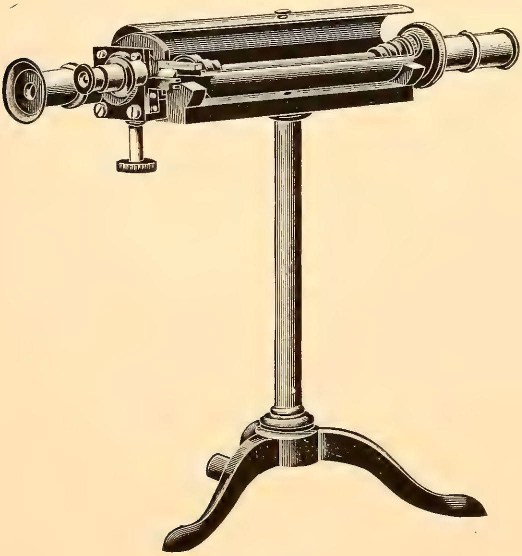
16465

16460 **Pliers—Flat-Nose.** Lap-joint; with blued handles; of high quality and practically universal in use.

No.	A	B	C	D	E	F	G	H	I
Length, in.	3	3½	4	4½	5	5½	6	7	8
Each	.85	.85	.90	.95	1.00	1.05	1.10	1.25	1.50

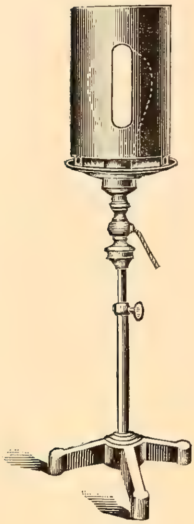
16465 **Pliers—Round-Nose.** Lap-joint; with blued handles; of high durability and accuracy.

No.	A	B	C	D	E	F	G	H	I
Length, in.	3	3½	4	4½	5	5½	6	7	8
Each	.85	.85	.90	.95	1.00	1.05	1.10	1.25	1.50



16470

16470 **Polariscope—Standard Medical.** Latest form; a half-shade apparatus for urine analysis, with quartz wedge compensator and linear scale; sugar and albumen in urine can read off directly down to 1/10 of 1%; provided with one tube 100 mm long and one tube 200 mm long; may be used with either gas or petroleum light; entire apparatus fitted in mahogany case, with lamp included ________________Each **$135.00**



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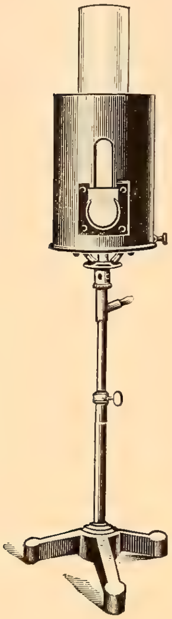


16480

16475 **Polariscope Lamp—Electric.** Consists of 32-candle power lamp, with silvered back; complete with wire and switch.................Each 16.00

16480 **Polariscope Lamp—Gas.** Consists of incandescent burner, two extra glass cylinders, two extra mantles and highly polished metal cylinder, which acts as reflector to flame ....Each 14.00

16485 **Polariscope Tubes.** Of glass; mounted.

No.	A	B	C	D	E	F
Length, mm	25	50	100	200	400	600
Each	4.20	4.20	4.20	5.00	5.00	5.00

16490 **Polariscope Tubes.** Of glass; unmounted.

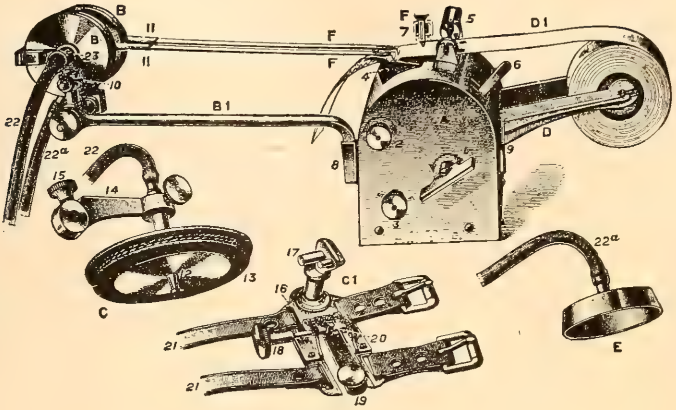
No.	A	B	C	D	E	F
Length, mm	25	50	100	200	400	600
Each	.75	.75	.75	.75	1.00	1.50

16495 **Glass Covers** for polariscope tubes ....Per 10 2.00

16500 **Rubber Washers** for polariscope tubes ....Per 10 .30

POLARISCOPES

We supply the products of Adam Hilger, Ltd., and Schmidt and Haensch, including the single wedge saccharimeter, and the double and triple wedge types of polariscopes with scales as desired.



16510

16510 Mackenzie Ink Polygraph, English made. Records two simultaneous tracings only, one being the radial pulse and the other either carotid, jugular, apex beat, etc. The inconvenience of the use of smoked paper is avoided and the permenancy of the ink tracings, which can be continued to almost any length, is an unusually desirable feature. The instrument is not attached to the patient's wrist which is another advantage. The clock work operates at variable speeds permitting the taking of protracted records at different speeds. Equipment consists of a wrist cuff with tambour for the radial pulse, metallic receiving capsules, two sets of pens, one dozen rolls of paper, bottle of ink, brush for loading pens and other necessary rubber tubes for connection -- Each **120.00**

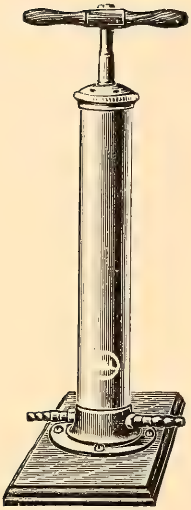
PHYSIOLOGICAL APPLIANCES AND APPARATUS

Physiological Instruments—Diagnostic and Clinical Instruments

Anatomical Charts and Models—Osteological Preparations

Physiological Reagents—Stains and Clinical Reagents

We are prepared to supply the above. Write us for particulars.



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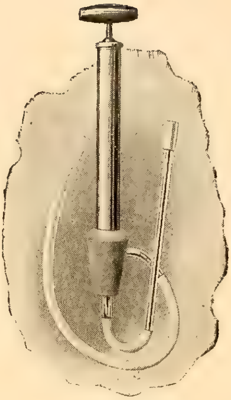

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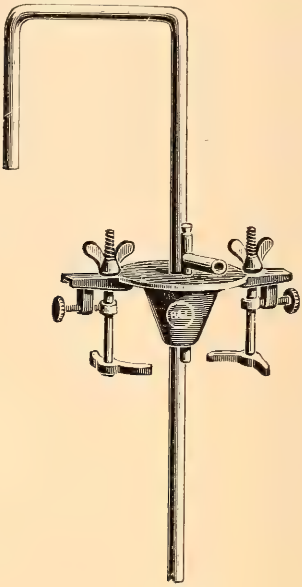

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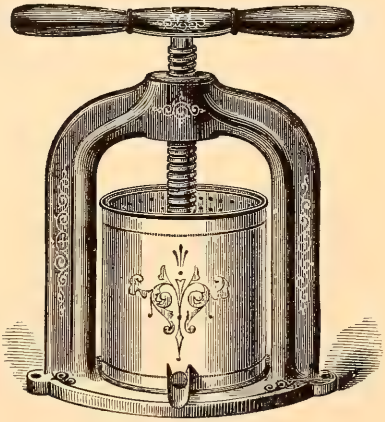
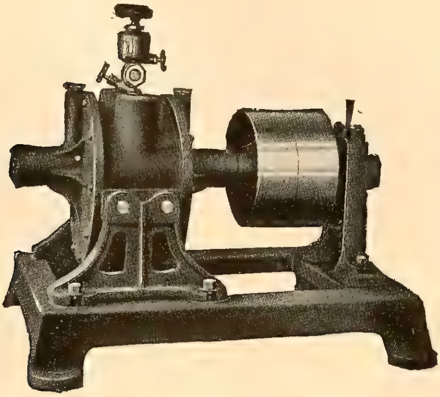


16525

16525 **Presses**—Tincture. Strong and durable.

	No. A	B	C	D
Capacity, liters	1	2	4	8
Each	4.80	6.00	9.60	15.00

16530	**Pump, Acid—Force Pump.** Furnished with stopper that will fit bottles or carboys having necks of 1¾ to 2⅝ in. inside diameter------Each	**8.00**
16535	**Pump, Acid.** For drawing acids, ammonia, or other liquids from large containers; gives continuous flow and may be checked instantly; rubber stopper fits any carboy ----------Each	**6.00**
	Glass parts only ----------	**2.50**
16540	**Pump, Air—Vacuum and Pressure.** Of heavy material, highly polished and nickel-plated; has two valves and two nipples for inlet and outlet of air; chamber, 400 x 55 mm; height, 540 mm; mounted on oak base ----------Each	**15.00**



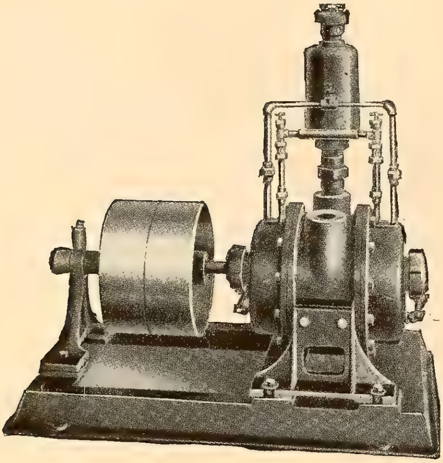
16560

16560 Pumps, Air—Crowell's Positive Pressure Blower. Particularly useful where space is limited; horse-power required, as indicated below, is based upon pressure of about one pound per square inch, being increased proportionately for each additional pound of pressure over one pound; air tank is not absolutely necessary, but when steady, well-regulated blast of specified pressure is needed, it is preferable to direct blast into tank provided with relief valve, which can be regulated to give desired pressure; size of air pipe to convey the air should be as large as the nipple or short pipe fitted in each blower; it is highly important that conducting pipes should not only be of suitable size, but as free from elbows and turns as possible, in order to minimize the power required to force the air through.

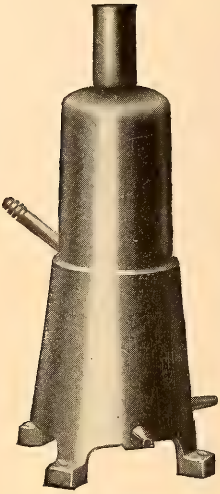
Size No.	1	2	3	4
Cu. in capacity per rev.	20	45	125	280
Max. speed per rev.	600	500	350	250
Pulley size, in.	4 x 1	4 x 1½	6 x 2½	9 x 3
Horse-power, approx.	⅛	¼	½	1
Max. pressure per sq. in., lbs.	8	8	8	8
Net weight, lbs.	24	34	90	170
Floor space, in.	10 x 6¼	12½ x 6½	22 x 14	28 x 17
Inlet and outlet, in.	½	¾	1	1½
Each	**26.00**	**34.00**	**53.00**	**66.00**

Size No.	5	6	8	10
Cu. in. capacity per rev.	460	690	1050	1660
Max. speed per rev.	200	200	200	200
Pulley size, in.	10 x 3	12 x 4	14 x 6	18 x 6
Horse-power, approx.	1½	2	3½	5
Max. pressure per sq. in., lbs.	8	8	8	8
Net weight, lbs.	225	320	575	770
Floor space, in.	34 x 20	38 x 20	48 x 22	54 x 28
Inlet and outlet, in.	2	2	2½	3
Each	**100.00**	**135.00**	**195.00**	**270.00**

For Motors See Page 333



16565



16570

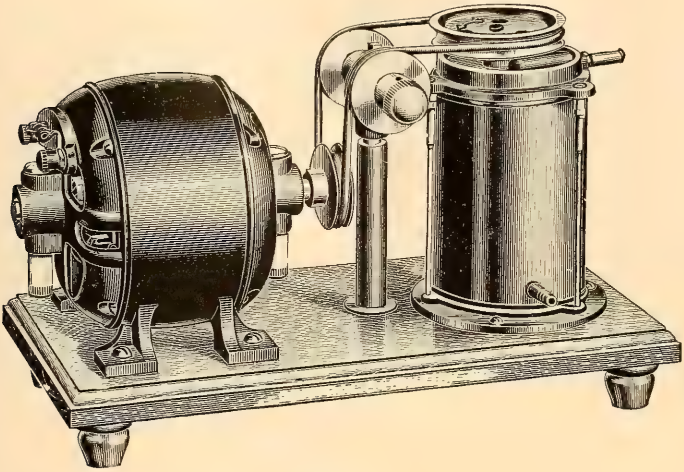
16565 **Pumps, Air—Crowell's Rotary Compressor, or Vacuum Pump.** Improved design, with water jackets and automatic lubricator, unsurpassed for many classes of work; simple in construction, positive in action and capable of any pressure up to 100 lbs. to the square inch; singly, they will compress to 25 lbs. to the square inch, with the pulleys furnished, being compounded for higher pressures; delivery is steady and there are no valves to give trouble; have no equal as vacuum pump, and are capable of any vacuum possible under local conditions of the atmosphere; prices for compound type furnished on application.

Size. No.	**1**	**2**	**3**	**4**	**5**
Cu. in. capacity per rev., in.	15	40	100	280	400
Max. speed, R.P.M.	500	400	300	250	200
Diameter of pulley, in.	6	8	12	14	18
Face of pulley, in.	2	2	4	4	6
Pressure capacity per sq. in., lbs.	25	25	25	25	25
Complete, each	**75.00**	**88.00**	**118.00**	**198.00**	**225.00**
Air Reservoir and Valve, each	**12.00**	**12.00**	**14.50**	**16.50**	**20.00**

16570 **Pump—Langmuir High Vacuum.** Capable of producing a vacuum limited only by evolution of gas from walls of vessel being evacuated; made entirely of metal; equipped with mercury connection tube, vacuum grease and electric heater for 110 volts__________Each **100.00**

The Langmuir Pump listed above may be supplied with a motor drive and mounted on a heavy wooden base if desired. Prices on application.

We carry a line of Motors suited for every laboratory purpose.



16585

16575 **Pump, Vacuum—Nelson.** Compact, operates with very small expenditure of power, requires no attention when in operation and should last indefinitely; about 7 in. high by 5 in. diam. at base; pump consists essentially of rotating gears, running in accurately fitting housings, the whole mechanism being immersed in a cistern of oil, which serves double purpose of sealing all joints air-tight, and of lubricating moving parts; unmounted; without motor.

No.	A	B
No. of Stages	2	3
Vacuum, mm	0.1	0.05
Each	**25.00**	**35.00**

16580 **Pump, Vacuum—Nelson.** Same as No. 16575 above, but mounted on hardwood base.

No.	A	B
No. of Stages	2	3
Vacuum, mm	0.1	0.05
Each	**30.00**	**40.00**

16585 **Pump, Vacuum—Nelson.** Same as No. 16575 above, but with ⅛ h. p., 110 volt, A. C. Motor.

No.	A	B
No. of Stages	2	3
Vacuum, mm	0.1	0.05
Each	**60.00**	**70.00**

16590 **Pump, Vacuum—Nelson.** Same as No. 16585, but for direct current.

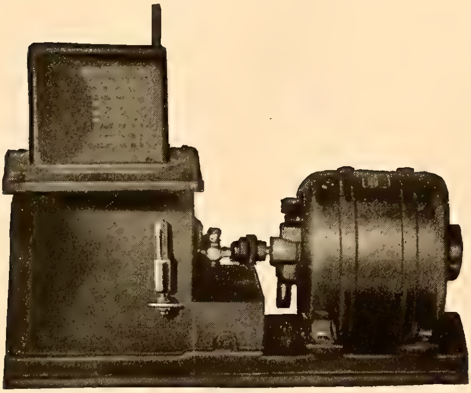
No.	A	B
No. of Stages	2	3
Vacuum, mm	0.1	0.05
Each	**60.00**	**70.00**

16595 **Pump, Vacuum—Nelson.** Same as No. 16585, but for 220-volt, alternating current.

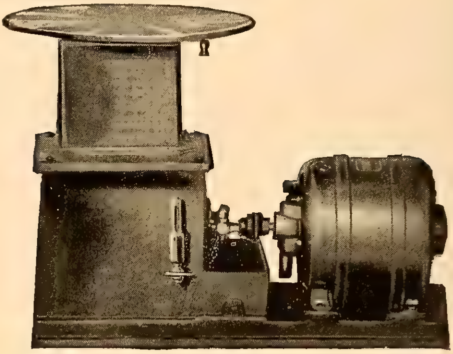
No.	A	B
No. of Stages	2	3
Vacuum, mm	0.1	0.05
Each	**63.00**	**73.00**

16600 **Pump, Vacuum—Nelson.** Same as No. 16595 above, but for direct current.

No.	A	B
No. of Stages	2	3
Vacuum, mm	0.1	0.05
Each	**63.00**	**73.00**



16615



16625

16615 **Pump—Vacuum.** Has large capacity, yet is compact and simple to operate; requires little power; is of positive displacement type, with all parts immersed in bath of oil, which makes joints air-tight and lubricates moving parts; it never sucks back, making it desirable for filtration and distillation work; can easily be moved from place to place; size of base, 7 x 18 in.; height over all, 14 in.; vacuum, at sea level, 29 in.; normal speed, 400 r. p. m.; displacement free air per minute, 3500 cubic in.; furnished complete with pump, motor, detachable plug and 6 ft. cord for attaching to any lamp socket; for direct current.

No.	A	B
Voltage	110	220
Each	**58.00**	**60.50**

16620 **Pump—Vacuum.** Same as No. 16615 above, but for alternating current.

No.	A	B
Voltage	110	220
Each	**68.00**	**70.50**

16625 **Pump—Vacuum.** Motor driven, with plate top; intended for general laboratory work wherever observations are to be made under vacuum; is light in weight and very compact; height, plate from table top, 14 in.; diameter, 12 in.; size of base, 7 x 18 in.; furnished complete with pump, motor, detachable plub and 6 ft. cord for attaching to any lamp socket; with cast iron plate; for direct current.

No.	A	B
Voltage	110	220
Each	**63.00**	**65.50**

16630 **Pump—Vacuum.** Same as No. 16625 above, but for alternating current.

No.	A	B
Voltage	110	220
Each	**73.00**	**75.50**

16635 **Pump—Vacuum.** Similar to No. 16625, but with polished brass plate; for direct current.

No.	A	B
Voltage	110	220
Each	**70.00**	**72.50**

16640 **Pump—Vacuum.** Same as No. 16635 above, but for alternating current.

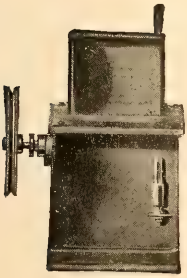
No.	A	B
Voltage	110	220
Each	**80.00**	**82.50**

16645 **Pump—Vacuum.** Similar to No. 16635, but with ground glass plate; for direct current.

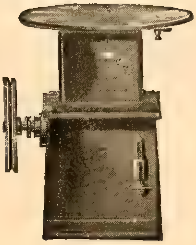
No.	A	B
Voltage	110	220
Each	**70.00**	**72.50**

16650 **Pump—Vacuum.** Same as No. 16640 above, but for alternating current.

No.	A	B
Voltage	110	220
Each	**80.00**	**82.50**



16655



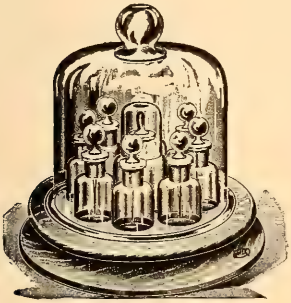
16660

16655 **Pump—Vacuum.** Similar to No. 16625, but without motor or plate; size of base, 7 x 7½ in.; size of motor required, 1/6 H. P.; furnished with 6-in. pulley for round ⅜-in. belt........Each 25.00

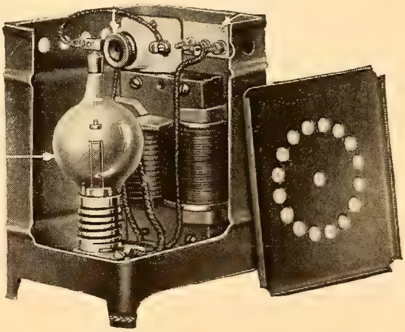
16660 **Pump—Vacuum.** Same as No. 16655 above, but with cast iron plate........Each 30.00

16665 **Pump—Vacuum.** Same as No. 16655, but with cast brass plate........Each 32.50

16670 **Pump—Vacuum.** Same as No. 16655, but with ground glass plate..Each 32.50



16675



16678

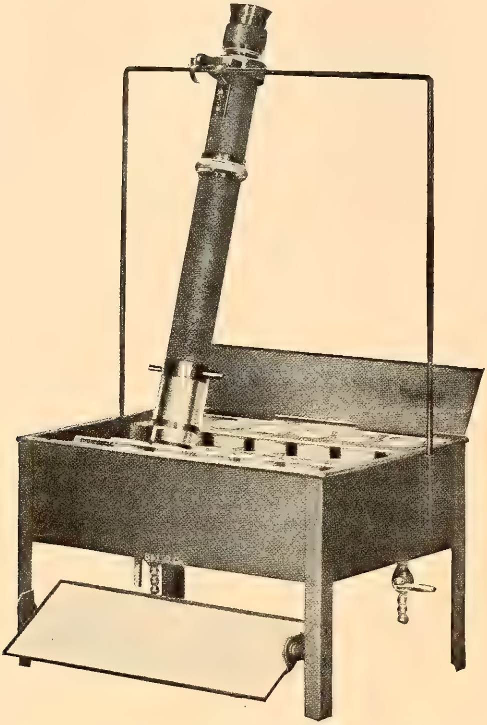
16675 **Reagent Stand.** Holds seven 15 cc reagent bottles and 1 oz. balsam bottle; bottles are covered by bell glass, flange of which fits into a groove in the oak base, making a dust-proof enclosure; furnished complete with bottles........Each 6.00

16678 **Rectifiers, Tungar.** An apparatus developed in the research laboratories of the General Electric Co. for supplying D. C. in small amounts where only A. C. is available. Consists essentially of a transformer, a reluctance and the Tungar bulb. The latter, with graphite anode and tungsten cathode, is argon filled and allows the current to flow in but one drection. An extremely useful apparatus for charging storage batteries or supply D. C. where desired. For 105-125 volt A. C. lines.

Frequency	60	40–50	25–30	125–133
Weight, net in lbs.	15	18	20	18
Each	**28.00**	**34.00**	**38.00**	**34.00**

Renewal bulbs for above........Each **8.00**

Other sizes of Tungars can be furnished........Prices on application



Refractometer, Dipping—Bausch & Lomb. The Dipping Refractometer is used to determine the refractive indices of fluids, such as alcoholic and weak acid solutions, water in milk, etc. The refractive index in turn is a factor in the determination of the purity of a solution, its degree of concentration, etc. The field of usefulness of the refractometer has widened each year until it is now practically indispensable in Chemical Laboratories, Health Department Laboratories, Dispensaries and Clinical Institutions. The instrument excels in accuracy all other refractometers with the possible exception of the Interference Refractometer. This, combined with the simplicity of operation, makes it a highly desirable instrument. With a little experience an observer can easily repeat measurements to within 0.2 of a scale division and under favorable conditions to 0.1. The latter value corresponds to from 3.5 to 4.0 units in the fifth decimal place for the D line.

The refractometer consists essentially of three parts:

1. The Telescope
2. The Compensating Prism
3. The Dipping Prism

The telescope is made up of an objective and an achromatic eyepiece. The scale from which the readings are taken is engraved on the plano surface on the lower lens of the eyepiece.

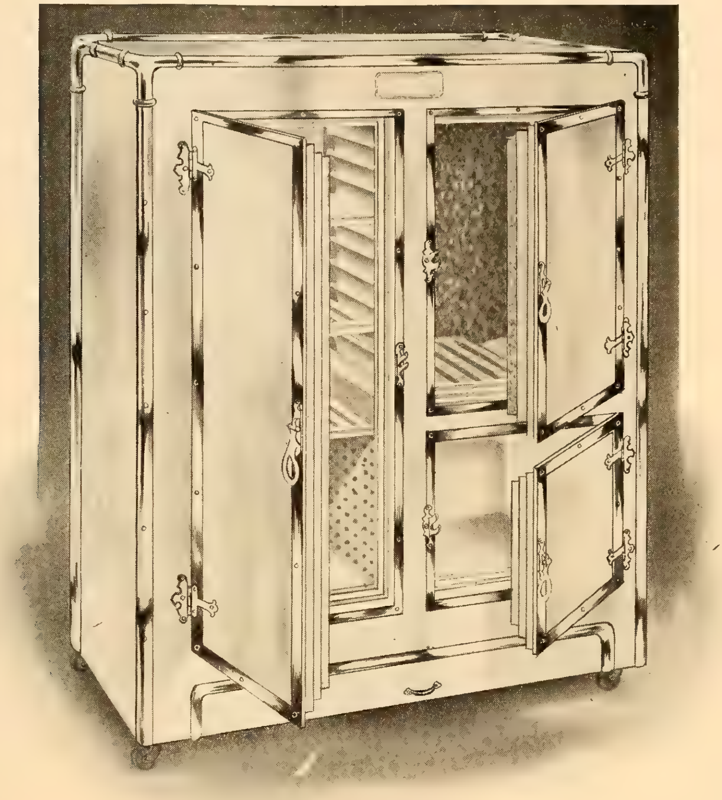
The compensating prism is a regular Amici prism. It is mounted in front of the objective and is rotatable about the telescope axis by means of the milled ring.

The dipping prism is mounted in front of the compensating prism. It is made of a hard acid resisting crown glass. The performance of the instrument as a whole depends to a great extent upon the accuracy of the workmanship of this prism.

We recommend the use of the constant temperature tank in connection with the refractometer. It enables one to take measurements much more conveniently and quickly and the results obtained are more satisfactory. If several liquids are to be compared they can be easily brought to the same temperature by placing the beakers containing the liquids in the rack in the tank.

The instrument is packed in a neat wooden case for protection and easy transportation, and is furnished with transposition tables and directions.

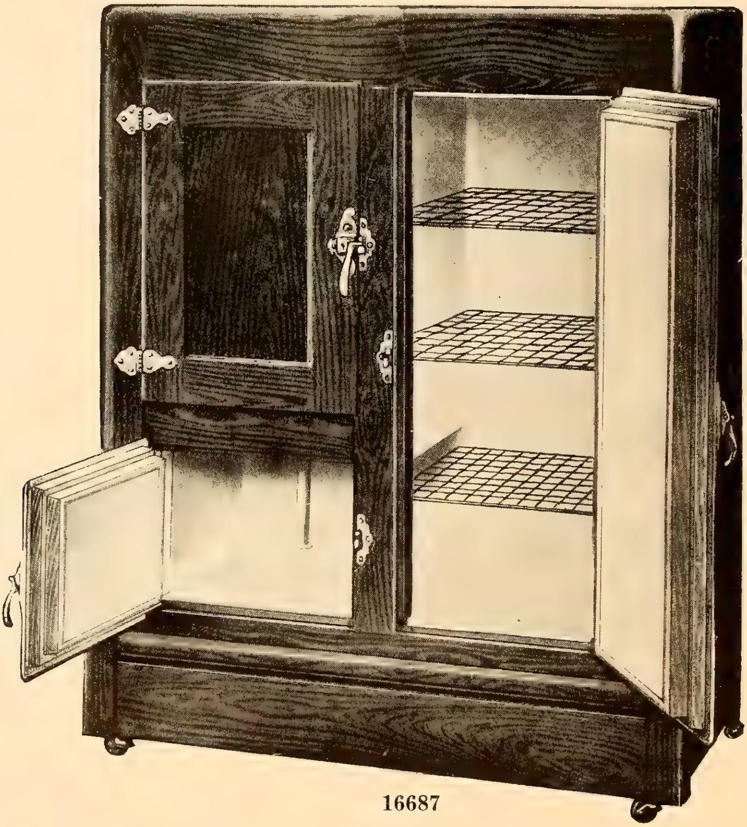
16680	**Dipping Refractometer,** in case with tables	Each	190.00
16681	**Constant Temperature Tank and Rack** for above, including 24 beakers	Each	23.00



16685

Refrigerators—Laboratory. Thoroughly insulated with ten thicknesses of material; open throat provided full width and height of ice chamber for circulation; have proved remarkably efficient in exact laboratory tests, as indicated by low temperature, low humidity and rapid circulation; those with vitreous enamel fused on steel, inside and out, are ideal laboratory equipment; inner lining is seamless, with round corners; exterior edges are bound with solid brass tubing, the door edges with flat brass, both copper and nickel-plated; other sizes quoted on request.

		No. A	B
	Outside Dimensions:		
	Height, cm	115	126
	Width, cm	95	102
	Depth, cm	53	56
	Cooling Chamber:		
	Height, cm	85 26	95 29
	Width, cm	37 42	40 45
	Depth, cm	38 38	40 40
	Ice capacity, lbs.	115	150
16685	Vitreous Enameled Steel Case	**205.00**	**225.00**
16686	Golden Oak Wood Case	**90.00**	**105.00**



16687

Refrigerators—Alaska. Recognized as one of the most efficient refrigerators now in use. Has seven insulating walls, carbonized pebbled cork being used with a cleat construction that divides the walls of the refrigerator into small compartments, preventing packing down or bare spots. Perfectly ventilated, lining of seamless steel, with heavy porcelain finish. Chambers have flush bottoms, and patent drain pipe and trap.

	Outside	Ice Chamber	Right Chamber	Left Chamber
Width, in.	30	13	12	13½
Depth, in.	17	13	13	13
Height, in.	40	16	28	9

16687 --Each **70.00**

	Outside	Ice Chamber	Right Chamber	Left Chamber
Width, in.	32	14	13	14½
Depth, in.	18	13½	14	14
Height, in.	43	18¼	31	10

16688 --Each **77.50**

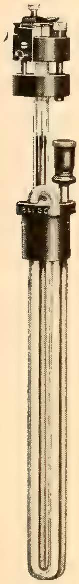
Refrigerators—Alaska. Same construction as No. 16687 above, but with two separate cooling chambers at right.

	Outside	Ice Chamber	Right Chamber	Left Chamber
Width, in.	36	16	15	16½
Depth, in.	20	15½	16	16
Height, in.	49	22	37	12

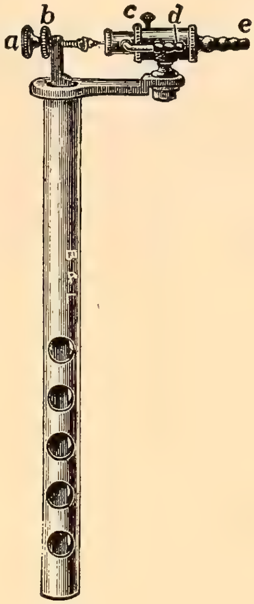
16687 --Each **97.50**

	Outside	Ice Chamber	Right Chamber	Left Chamber
Width, in.	38	17	16	17½
Depth, in.	21	16½	17	17
Height, in.	52	24½	40	13

16690 --Each **110.00**



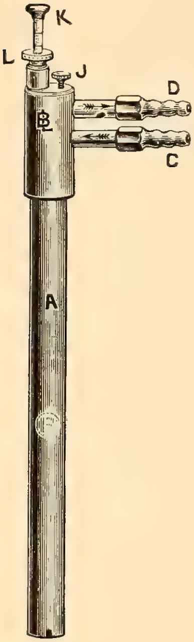
16695



16698

Regulator, Thermo—Mast Electric. Designed by Dr. S. O. Mast, associate professor of zoology at Johns Hopkins University, to meet demand for accurate and sensitive electric thermo-regulator; simple in construction and easily operated; can be used in connection with any form of electric lamp or stove as heating unit; 16 c. p. carbon lamp, providing sufficient heat for fairly large paraffin bath, can be operated without relay; if more heat is desired, more than one regulator or a relay must be used; apparatus consists of a tube, one end of which is extended upwards to carry operating mechanism; furnished in two forms—one, with single straight tube of small bore widening into a wall at the bottom, the other with a double U-tube; in first form tube is filled with mercury, in latter with glycerine, alcohol or toluol, and at top with mercury; while second form is more delicate, it affords a very sensitive control, which, under favorable conditions, does not vary more than 1/10°; a cork, connected by a fine rod with a movable cross piece, which closed the relay or switch, floats in mercury, which, when temperature rises, expands, causing the cork to rise and close the circuit; when heat drops again, mercury contracts, forcing the cork to sink and open the circuit; adjustment is provided for regulating the space through which the cork must move before operating the switch.

16695	**No. A.** Simple Type	Each	10.50
16696	**No. B.** Double U-Tube Type	Each	12.00
	Regulator, Roux Bimetallic. An accurate regulator made without the use of mercury or glass; most accurate of the gas regulators, yet simple in operation; can be adjusted to regulate an even temperature more constantly than others; large size	Each	12.00
16698	**Regulator, Roux Bimetallic.** Small size	Each	11.25
16700	**Regulator, Roux Bimetallic.** For high temperatures	Each	14.50



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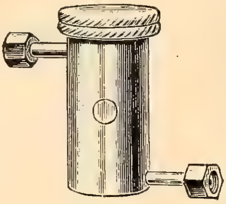

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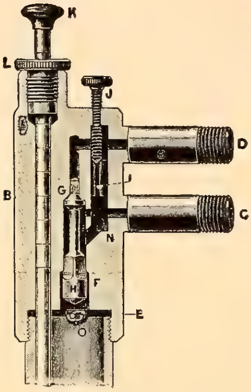

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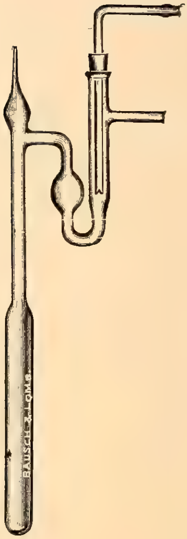


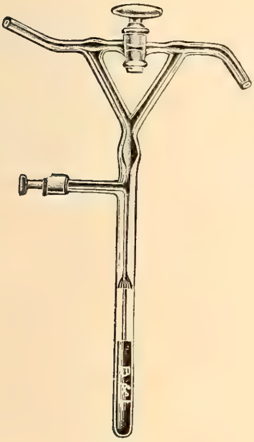
16720

16702 **Regulator, Thermo—Greenman's.** Made entirely of steel; consists of steel tube "A" (see illustration) filled with mercury and screwed tightly into body of regulator "B"; gas entering at "C" must pass valve "H," before passing to burner through "D," except small quantity, determined by screw valve "J," which passes through by-pass "I" to maintain pilot flame; mercury in tube "A," when expanded, raises valve "H" against conical valve seat "G," and valve is prevented from falling too far by pin at "O"; volume of mercury is controlled by rod "K," held in place by screw "L"; by adjusting rod "K" and screw valve "J," an extremely accurate control of gas supply and temperature can be maintained; slightest increase in volume of mercury in tube "A" produces considerable difference in height of mercury in passing "F," and float "H," which is about two-thirds submerged in the mercury, is carried upwards and closes valve at "G"; brass tube, in which regulator is to be inserted, should be filled with glycerine; metallic tubing should be used in making connections with thermo-regulator; both inlet and outlet tubes have ⅛-in. iron pipe size thread --Each **15.00**

16704 **Regulator, Gas Filter.** For Greenman's Regulator above; may also be used with Roux regulator, to remove coal tar and other solids, thereby assuring perfect operation of regulator---------------Each **6.50**

16720 **Regulator, Thermo—Dunham's.** An extremely sensitive regulator in which the sensitiveness is derived from large alcohol bulb; minute changes in volume of alcohol, as caused by variations in temperature, act upon U-shaped column of mercury and control volume of gas which passes through the tubes; adjustments for the different temperatures to be maintained are made by sliding gas inlet tube upward or downward as required; furnished complete, with liquid and mercury for filling and directions for use--------------------Each **5.50**

16721 **Glass Parts** only, for Dunham's Thermo Regulator above--------Each **3.50**



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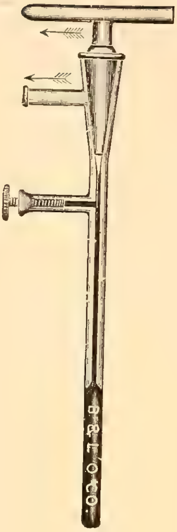

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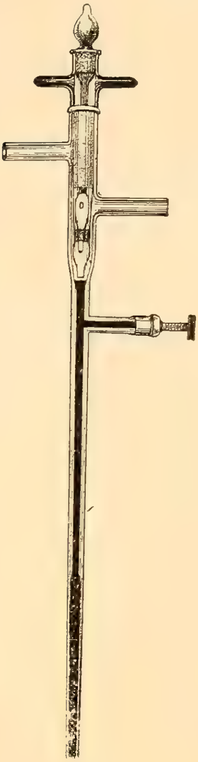
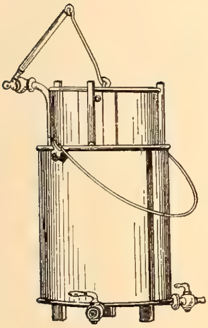
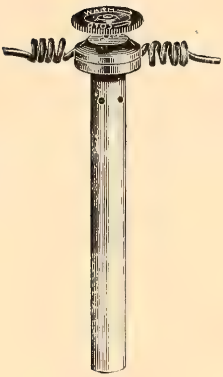


16750

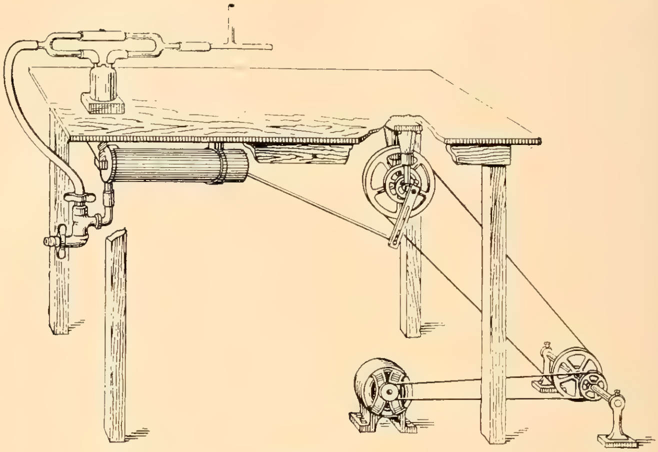


16755

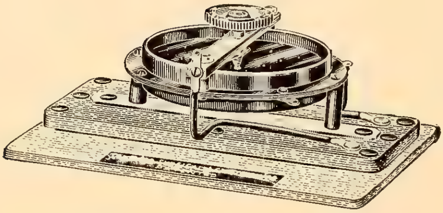
16725	**Regulator, Thermo—Muencke's Improved.** For low pressure only; stopcock controls passage of gas through horizontal tube to reserve flame; when temperature rises, gas supply is reduced by mercury closing passage at the fork	Each	5.00
16730	**Regulator, Thermo—Reichert's.** For high temperatures	Each	4.00
16735	**Regulator, Thermo—Reichert's.** For low temperatures	Each	4.00
16740	**Regulator, Thermo—Reichert's.** Short form for water baths	Each	4.00
16750	**Regulator, Thermo—Reichert-Novy's.** An improved form for high or low temperatures; may be adjusted so that maximum flow of gas, which is ample for high temperatures, may be reduced to amount just sufficient to keep flame from going out; when used in connection with gas pressure regulator No. 16755, will work to greatest satisfaction	Each	6.50
16755	**Regulator, Gas Pressure—Murrill's.** For use with thermostat, relieving thermostat of necessity of caring for wide variations apt to occur in the gas pressure; with it temperature may be held constant to within 1°C; made of copper and provided with two outlets	Each	11.75



16759



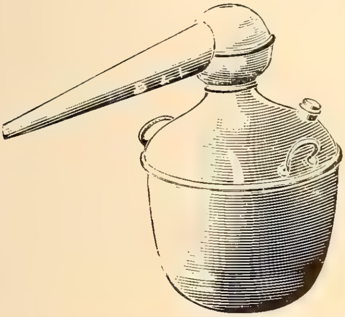
16760



16758

16758	**Thermostat—Electric.** Mounted on transite base; dimensions over all, 175 x 140 mm; complete with condenser ______________________Each	11.00
16759	**Thermostat—Electric, Pencil Type.** For controlling temperature of liquids; consists of thin, metal tube, 6 in. in length x ¾ in. in diameter, hermetically closed at bottom end and containing sensitive, bimetallic bar, which extends from bottom half-way up tube; contact points are protected by condenser, which kills the electric spark, providing the electric current, passing through same, does not exceed one ampere; range of temperature, from 30 to 70°C__Each	12.00
16760	**Respiratory Apparatus—Hanzlik's.** Designed especially for the use of large classes of students, also serviceable for research work; will accommodate a number of animals, permitting a variation of respiration, as to rate and volume, as required by different animals; consists of long motor-driven shaft, which in turn drives series of pumps by set of pulleys, permitting regulation of the rate and volume of respiration; each pump and fittings, properly attached to a table, constitute a unit, and these units may be multiplied up to the driving capacity of the motor; each table is detachable, apparatus is practically out of view and can occupy so-called "dead space" in the laboratory; cylinder is 38 x 7½ cm diameter, having capacity of 1770 cc; by adjusting position of piston shaft at the crank any volume of air may be obtained, and by adjusting belt on the different sized pulleys, different rates of respiration per minute may be obtained, the larger 20 cm wheel giving 20, the medium 10 cm wheel 40 and the 5 cm wheel 80; the table and anaesthetizing attachment shown on top of table, consisting of ordinary two-necked Woulff Bottle with glass and rubber connecting parts, are not included in equipment; size of motor to be employed depends upon number of units to be operated, as follows: 1/16 H. P. for 1 or 2 unit, 1/18 H. P. for 3 to 6 unit, and 1/14 H. P. for 7 to 10 unit; furnished without motor ____Each	72.00

(Also see descriptive article by Dr. Paul J. Hanzlik, of Western Reserve University, Cleveland, Ohio, in "The Journal of Laboratory and Clinical Medicine," Vol. I, No. 9, 1916, pp. 688-690.)



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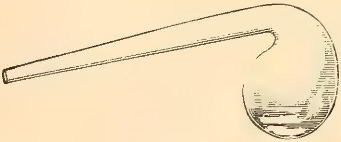

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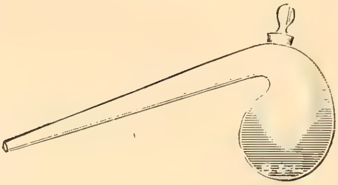

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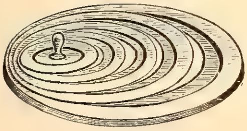

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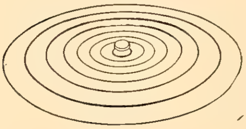


5855

16765 **Retorts—Copper.** Made of heavy copper, tin-lined; for distilling water, recovering alcohol, etc.

No.	A	B	C	D	E
Capacity, liters	2	4	8	12	20
Each	7.50	10.50	13.50	18.00	24.00

4895 **Retorts.** Of glass; plain.

No.	A	B	C	D	E	F
Capacity, cc	25	50	75	100	150	250
Each	.75	.85	.95	1.05	1.25	1.35

No.	G	H	I	J	K
Capacity, cc	500	1000	2000	4000	8000
Each	1.85	2.50	3.80	6.50	11.00

4900 **Retorts.** With ground-glass stopper.

No.	A	B	C	D	E
Capacity, cc	25	50	75	150	250
Each	1.25	1.35	1.45	1.85	2.05

No.	F	G	H	I	J
Capacity, cc	500	1000	2000	4000	8000
Each	2.55	3.35	5.00	8.00	13.00

16770 **Rings—Concentric.** Of copper, tinned inside; for water baths, etc.; with cover.

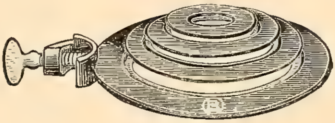
No.	A	B	C	D	E	F	G
No. in set	3	4	5	5	7	8	9
Diameter, outside, mm	100	125	140	150	200	250	300
Per set	.90	1.10	1.20	1.35	2.25	3.80	7.20

16775 **Rings—Concentric.** Of iron; for tripods.

No. in set	3	4	5	6	7
Diameter, outside, mm	140	165	190	225	260
Per set	.40	.55	.75	1.00	1.40

5855 **Rings—Concentric.** Of porcelain; glazed on top; with cover.

Size No.	2	3	4	5	6	7
Outside diam. of largest ring, mm	75	95	120	160	205	250
Number of rings in set	2	3	4	5	6	7
Per Set	.60	.80	1.20	1.65	2.20	2.70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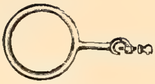
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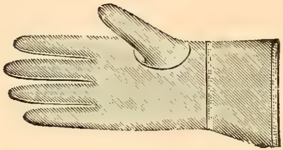
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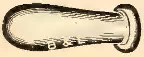
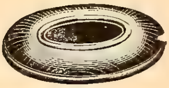

16795

16800


16805

16780 **Rings—Support.** With extension; to be used with clamp holder.

No.	A	B	C	D
Diameter, mm	75	100	130	175
Each	.18	.20	.25	.30

16785 **Rings—Support.** Applicable to any support; with clamp.

No.	A	B	C	D
Diameter, mm	75	100	130	175
Each	.25	.28	.32	.40

16790 **Rings.** Of cast iron, with clamp for use on Retort Stand, to support funnels, dishes, etc., etc.

No.	A	B
Diameter, outside, mm	150	200
No. in set	3	4
Each	.90	1.20

16795 **Rubber Bulbs.** For pipettes; of pure gum.

No.	A	B	C	D
Capacity, cc	2	3	5	10
Per dozen	.30	.30	.40	1.60

16800 **Rubber Bulbs.** For large pipettes, syringes, etc.

No.	A	B	C
Length, mm	60	80	90
Diameter, mm	32	38	45
Each	.15	.18	.20

16805 **Rubber Caps.** For covering tops of test tubes, cylinders, etc.

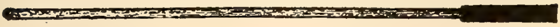
No.	A	B	C	D	E	F
Diameter, mm	12	18	25	38	50	75
Per dozen	1.35	1.35	1.35	1.50	1.50	2.00
Per gross	13.20	13.20	13.20	15.00	16.50	19.80

16810 **Rubber Fingers.** Of pure gum; finest quality.

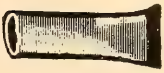
No.	A	B
Size	Small	Large
Per dozen	.60	.70
Per gross	6.00	7.00

16815 **Rubber Gloves.** Of pure gum; finest quality; 125 mm gauntlet.

No.	A	B
Size	6 to 9	10 to 12
Each	1.50	1.50



16830



16835

16840

16850

16830 **Rubber Policemen.** For washing down precipitates from the walls of beakers; glass rods with rubber tips.

No.	A	B
For rods, diam. in.	⅛	3/16
Per dozen	.90	1.00

16835 **Rubber Policemen.** Similar to No. 16830, but without rods.

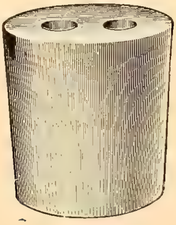
No.	A	B
For rods, diam., in.	⅛	3/16
Per dozen	.10	.12

16840 **Rubber Policemen.** Flat, wide shape, with glass rod .... Per Dozen 1.25

16845 **Rubber Policemen.** Same as No. 16840 above, but without glass rod .... Per Dozen .75

16850 **Rubber Policemen.** For scraping precipitates from side of beakers, etc.; has glass handle, with soft cone-shaped tip .... Each .20
Per Dozen 2.00

16855 **Rubber Policemen.** Same as No. 16850 above, but without glass rod .... Each .10
Per Dozen 1.00



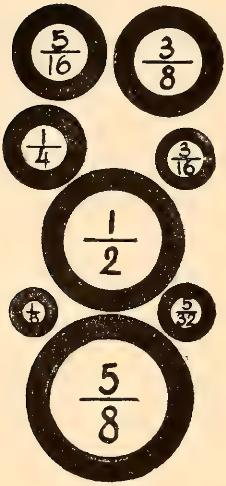
16860

16860 **Rubber Stoppers.** Pure gum, best quality; will not harden; unsurpassed in purity and resistance to chemicals; supplied solid, unless ordered with one or two holes; length, 25 mm.

No.	00	0	1	2	3	4	5	6
Diameter, top, mm	14	17	18	20	23	25	27	32
Diameter, bottom, mm	10	12	15	16½	18	20	23	26
Approx. number with two holes, in one lb.	148	101	67	59	44	36	32	22
Per pound	1.50							

No.	7	8	9	10	11	12	13
Diameter, top, mm	37	41	45	50	56	65	70
Diameter, bottom, mm	30	33	37	42	50	59	60
Approx. number with two holes, in one lb.	15	13	11	8	7	5	4
Per pound	1.50						

16865 **Rubber Tissue** .... Per ounce .35
Per pound 4.50



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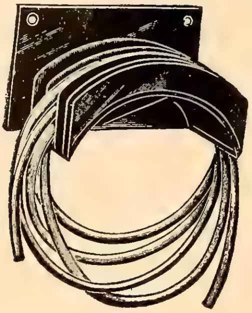

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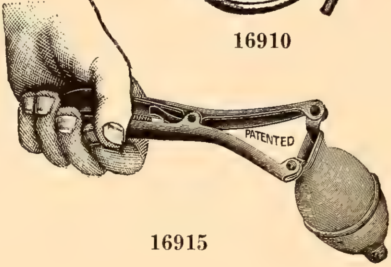

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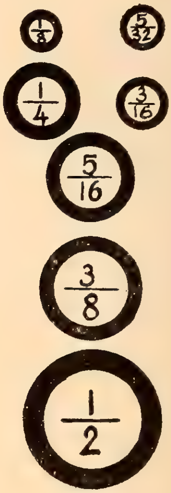


16870

16870 **Rubber Tubing.** Black, pure gum; best quality, seamless; will not harden; very desirable; original length, 3½ meters (12 ft.).

No.	A	B	C	D	E	F	G
Diameter, inside, mm	3	4	5	6	8	9	12
Per foot	.04	.06	.10	.14	.26	.28	.45

16875 **Rubber Tubing.** Black; same as No. 16870 above, but heavy wall.

No.	A	B	C	D	E	F	G	H	I
Diameter, inside, mm	3	4	5	6	8	9	12	15	18
Per foot	.10	.13	.15	.25	.28	.48	.62	.85	1.25

16880 **Rubber Tubing.** Pure gum; very elastic; for Gooch crucibles.

No.	A	B	C	D	E
Diameter, mm	25	30	40	45	50
Per foot	.15	.18	.20	.25	.30

16885 **Rubber Tubing.** Red or antimony; very best quality.

No.	A	B	C	D	E	F	G
Diameter, inside, mm	3	4	5	6	8	9	12
Per foot	.08	.09	.10	.12	.21	.22	.40

16890 **Rubber Tubing.** Red or antimony; same as No. 16885 above, but heavy wall.

No.	A	B	C	D	E	F	G	H	I
Diameter, inside, mm	3	4	5	6	8	9	12	15	18
Per foot	.09	.11	.16	.22	.24	.36	.48	.65	1.00

16895 **Rubber Tubing—Cloth Impression.** Extra quality; very flexible; will not split; air-tight and suitable for gas or liquid; hand-made.

No.	A	B	C	D	E	F	G
Diameter, inside, mm	3	4	5	6	8	9	12
Per foot	.05	.05	.06	.10	.13	.17	.26

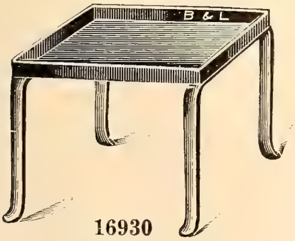
16900 **Rubber Tubing—Cloth Impression.** Same as No. 16895 above, but double thickness.

No.	A	B	C	D	E	F	G	H	I
Diameter, inside, mm	3	4	5	6	8	9	12	15	18
Per foot	.07	.08	.10	.15	.16	.20	.32	.36	.46

16905 **Rubber Tubing—Pressure.** For use with filter pumps, etc.

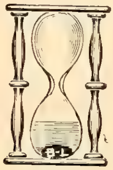
No.	A	B	C	D	E	F	G
Diameter, inside, mm	3	4	5	6	8	9	12
Per foot	.08	.12	.17	.24	.26	.38	.43

16910	**Rubber Tubing Rack.** For preventing rubber tubing from kinking; made of Russian iron ———— Each	1.25
16915	**Rubber Tubing Stretcher.** For increasing bore of tubing to facilitate attaching to connection tubes, etc. ———— Each	.50



16930

16920



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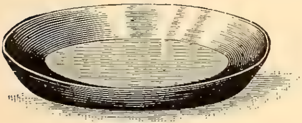

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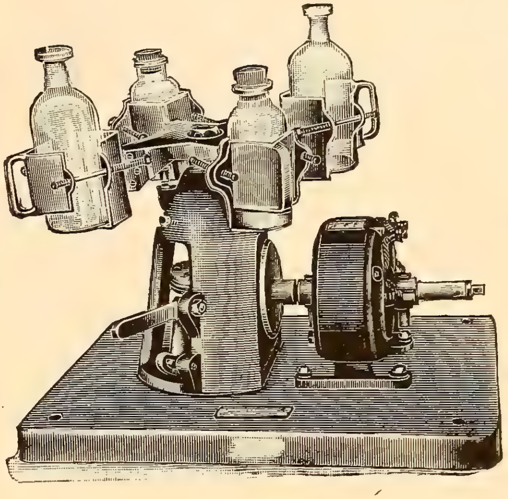


16925

16920 **Sand Baths.** Deep form; of sheet steel.

No.	A	B	C	D	E	F	G	H
Diameter, mm	50	75	100	125	150	175	200	250
Each	**.08**	**.09**	**.12**	**.22**	**.30**	**.45**	**.55**	**1.20**
Per dozen	**.90**	**1.00**	**1.40**	**2.40**	**3.00**	**4.50**	**5.50**	**12.00**

16925 **Sand Baths.** Shallow form; of sheet steel.

No.	A	B	C	D	E	F	G	H
Diameter, mm	50	75	100	125	150	175	200	250
Each	**.09**	**.10**	**.13**	**.18**	**.22**	**.34**	**.42**	**.85**
Per dozen	**.90**	**1.10**	**1.30**	**1.80**	**2.20**	**3.40**	**4.20**	**8.50**

16930 **Sand Bath or Hot Plate.** Of iron.

No.	A	B	C
Size, mm	150 x 200	200 x 250	250 x 300
Each	**2.00**	**2.70**	**3.40**

16935 **Sand Bath or Hot Plate.** Same as No. 16930 above, but on removable legs.

No.	A	B	C
Size, mm	150 x 200	200 x 250	250 x 300
Each	**2.40**	**3.25**	**4.00**

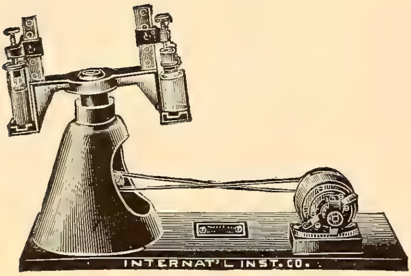
16940 **Sand Glasses,** in polished wooden stands.

No.	A	B	C	D	E	F	G	H	I	J
Time, minutes	¼	½	1	2	3	5	10	30	45	60
Each	**.75**	**.75**	**.75**	**.75**	**1.00**	**1.25**	**1.50**	**2.50**	**3.00**	**3.50**

16945 **Shaking Apparatus—Electric, I. E. Co.** 4-bottle size; with heavy iron base and substantial construction to insure smooth operation; has clamps to accommodate four ordinary bottles, of from 200 to 1000 cc capacity; smaller bottles or tubes may be held by fitting blocks; maximum allowable speed, with small bottles, about 600 r. p. m., with 1000 cc bottles, about 300 r. p. m.

No.	A	B
Current	110-V., D.C.	110-V., A.C., 60 Cyc.
Each	**140.40**	**145.60**
No.	C	D
Current	220-V., D.C.	220-V., A.C., 60 Cyc.
Each	**140.40**	**145.60**

16946	**Cast-iron Stand** for mounting shaker above	Each	**15.60**
16947	**Sputum Shaker Head for 24 bottles**	Each	**62.40**



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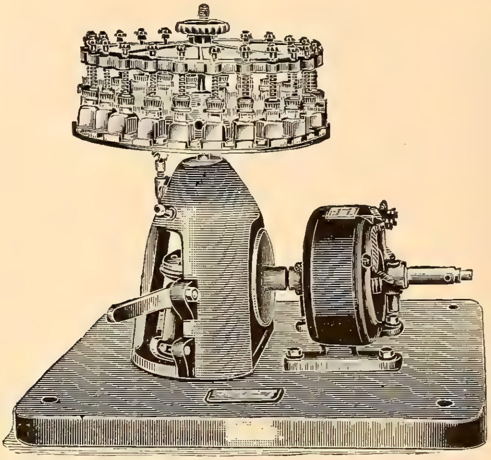


16965

16955 **Shaking Apparatus—Electric, I. E. Co.** 2-bottle, 50 cc size; will carry two small bottles or tubes, up to 50 cc capacity, in which suspected sputum is collected; has speed of about 1000 r. p. m., thus subjecting contents to very vigorous shaking.

No.	A	B
Current	110-V., D.C.	110-V., A.C., 60 Cyc.
Each	84.50	**91.00**
No.	C	D
Current	220-V., D.C.	220-V., A.C., 60 Cyc.
Each	**84.50**	**91.00**

16960 **Shaking Apparatus—Electric, I. E. Co.** Similar to No. 16955 above, but has four arms to take small bottles or tubes up to 50 cc capacity and will give speed of about 800 r. p. m.

No.	A	B
Current	110-V., D.C.	110-V., A.C., 60 Cyc.
Each	**89.70**	**96.20**
No.	C	D
Current	220-V., D.C.	220-V., A.C., 60 Cyc.
Each	**89.70**	**96.20**

16965 **Shaking Apparatus—Electric, I. E. Co.—Rickards' "Sputum Shaker."** Designed after ideas of Dr. B. R. Rickards, former director of the bacteriological laboratory of Boston Board of Health; 24-bottle size, providing effective apparatus for routine laboratory work where there are many samples daily, each of which must be rigorously inspected; maximum speed, about 600 r. p. m.

No.	A	B
Current	110-V., D.C.	110-V., A.C., 60 Cyc.
Each	**140.40**	**145.60**
No.	C	D
Current	220-V., D.C.	220-V., A.C., 60 Cyc.
Each	**140.40**	**145.60**

Extras:

16966	Square Trunnion Cups for sputum bottles No. 16965	Each	1.10
16967	Square Sputum Bottles, with corks	Per dozen Per gross	.78 6.50
16968	Cast-iron Stand for sputum shaker No. 16965 above	Each	15.60
16969	4-Bottle, 1000 cc Shaker Head	Each	62.40

4920

16980

16985

5870-75

5880-85

5890-95

16975 **Spatulas—Aluminum.** With spatula on each end.

No.	A	B	C	D	E
Length, mm	130	150	210	250	300
Each	.30	.40	.60	.70	1.00

4920 **Spatula—Glass.** With ground blade; length, about 150 mm......Each .25

16980 **Spatulas—Horn.** Best quality; with spatula on each end.

No.	A	B	C	D
Length, mm	100	125	150	200
Each	.14	.16	.18	.35

16985 **Spatula—Nickel.** Solid; with spatula on each end; length, 180 mm.Each .85

5870 **Spatulas.** Coors porcelain, glazed throughout, long spatula on one end, knob on other.

Size No.	1	2	3	4	5	5a	6
Length, mm	115	155	200	275	315	345	442
Each	.42	.50	.74	1.02	1.32	1.56	3.18

5875 **Spatulas.** Ohio porcelain, spatula on one end, knob on other.

Size No.	1	2	3	4	5	6	7
Length, mm	120	145	195	250	310	360	420
Each	.25	.30	.40	.60	.70	.90	1.50

5880 **Spatulas.** Coors porcelain, glazed throughout, spatula both ends.

Size No.	1	2	3	4	5	5a
Length, mm	105	120	150	195	212	225
Each	.30	.42	.50	.66	.86	1.02

5885 **Spatulas.** Ohio porcelain, double ends.

Size No.	1	2	3	4	5	6	7
Length, mm	120	145	195	250	310	360	420
Each	.25	.30	.40	.60	.70	.90	1.50

5890 **Spatulas.** Coors porcelain, spoon on one end, spatula on other.

Size No.	1	1a	2	3	4	4a	5	6
Length, mm	96	120	140	160	190	203	247	490
Each	.25	.32	.46	.60	.72	.90	1.02	3.30

5895 **Spatulas.** Ohio porcelain, spoon on one end, spatula on other.

No.	1	2	3	4	5
Length, mm	120	145	195	250	310
Each	.25	30	.40	.60	.70

16990

16995

16990 **Spatulas—Steel.** Flexible steel blade with steel handle; nickel-plated.

No.	A	B	C	D	E	F	G
Length of blade, mm	75	100	125	150	200	250	300
Each	.75	.80	.90	1.00	1.40	2.70	4.10

16995 **Spatulas—Steel.** So-called palette knife; flexible steel blade, with wooden handle.

No.	A	B	C	D	E	F	G	H
Length of blade, mm	75	100	125	150	175	200	250	300
Each	.45	.50	.55	.70	.85	1.10	1.80	3.00

SPECTROSCOPES

We supply the Spectrometers and Photometers of Adam Hilger, Ltd., also instruments of the direct vision type manufactured by Browning, London.

17000

17005

17020

17000 **Spoon—Bone.** Best quality; length, 80 mm____________________Each .15

17005 **Spoons—Bone.** With spatula end.

No.	A	B
Length, mm	150	170
Each	.25	.30

4925 **Spoons—Glass.** Of light, blown glass.

No.	A	B	C
Size	Teaspoon	Dessertspoon	Tablespoon
Each	.30	.35	.60

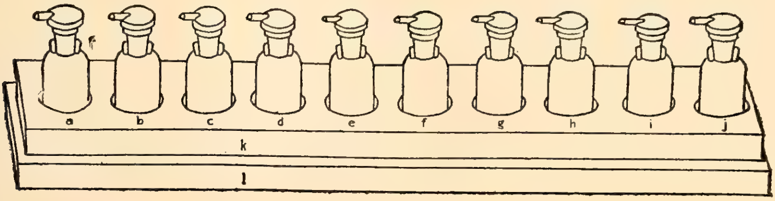
17010 **Spoons—Horn.** Best quality.

No.	A	B	C	D	E	F	G	H	I	J
Length, mm	80	100	120	150	180	200	220	240	280	300
Each	.10	.13	.15	.24	.30	.35	.45	.55	.75	1.00

17015 **Spoons—Horn.** With spatula end.

No.	A	B	C	D	E	F	G	H	I	J
Length, mm	80	100	120	150	180	200	220	240	280	300
Each	.15	.20	.24	.28	.35	.40	.50	.60	.75	1.00

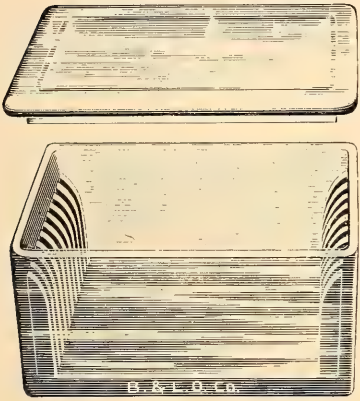
17020 **Spoon—Pure Nickel.** With spatula end; length, 180 mm__________Each .85



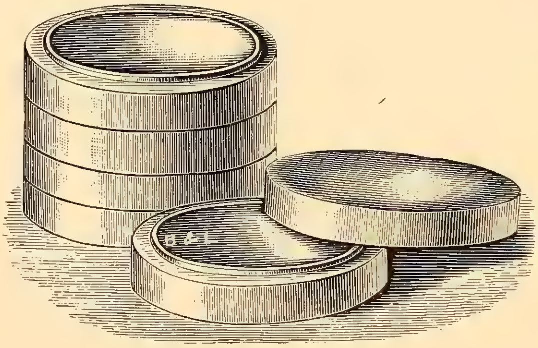
17055

17055 **Staining Block.** For ten bottles; consists of mahogany block with holes sunk in top for the bottles; well finished with beveled edges; without bottles --Each 4.00

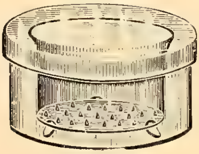
17057 **Staining Block.** Same as No. 17055 above, but with bottles, each bottle holding 30 cc and provided with a snout leak (T K Patent) with labels blown in glass. See No. 1477, page 76----------------Each 7.50



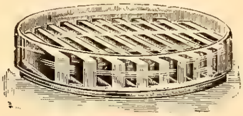
17025



17040



17035



17030

17025 **Staining Dish.** Of heavy, clear white glass, with cover; requires very little fluid, and slides are easily introduced and removed; inside dimensions, 75 x 58 mm; permits treatment of 20 slides at once--Each .30

17030 **Staining Dish—Moore's.** For holding cover glasses or slides during hydration, staining, dehydration, etc., of preparations; is very convenient and economical in amount of reagent required, heavy glass disc taking up space in the dish not needed for glasses---Each .80

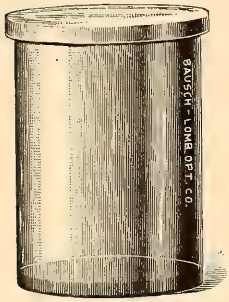
17035 **Staining Dish—Steinach's.** Consists of inner glass vessel supported on glass feet and with perforated bottom, contained in heavy outer dish with cover ground on air-tight; sections may be lifted out, permitting changing of reagents without folding, tearing or losing sections; diameter of outer dish, 65 mm--------------------------Each 1.60

17040 **Staining Dishes—Porcelain.** In nests of five dishes, with cover.

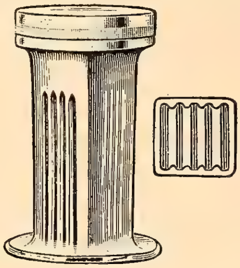
No.	A	B	C	D
Diameter, outside, mm	64	72	84	100
Per nest	.75	.85	1.00	1.20

17043 **Staining Dishes—Porcelain.** Same style as No. 17040 above, but deeper; in nests of three dishes, with cover.

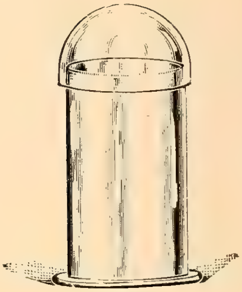
No.	A	B	C
Diameter, outside, mm	72	84	100
Per nest	.90	1.10	1.30


BAUSCH-LOMB OPT. CO.

17046



17048

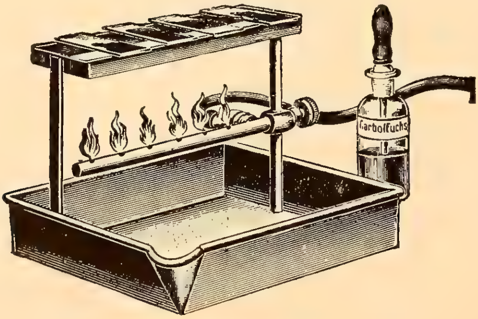


17050

17046 **Staining Jar.** Of heavy, clear white glass, with loose cover; bottom polished perfectly plain; size, 85 x 35 x 15 mm_______________Each .35

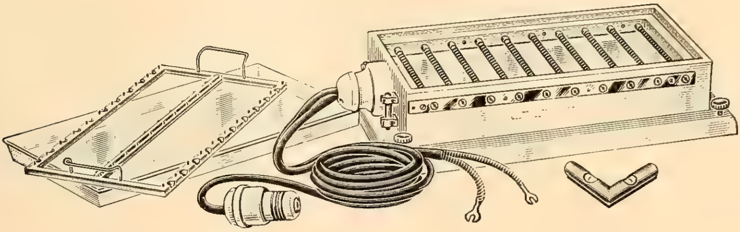
17048 **Staining Jar—Coplin's.** Of heavy, clear white glass, with ground-on cover; for convenient manipulation of sections attached to slides; very economical of reagents; capacity, ten 25 x 75 mm slides__Each .40
Per dozen 4.50

17050 **Staining Jar—Naples.** Used in Marine Biological Laboratories at Naples and Woods Hole, Mass.; has straight glass tube with heavy glass base to prevent overturning; covers are interchangeable; height without cover, 90 mm; diameter, 35 mm____________________Each .30



17055

17055 **Staining Support—Rabinowitsch-Kemper.** Can be employed advantageously in any laboratory, as it adds to efficiency of staining microscopical specimens; slides are placed on upright frame and stain poured over them, while copper pan collects excess of stain; burner with six flames can be raised and lowered and gas flow regulated so that fixing process can be adjusted in exact accordance with stain or specimen involved; burner can be connected to main gas supply by rubber tubing; upright stand and burner are made of brass, and pan of heavy sheet copper; complete with copper pan, brass stand and brass burner, with adjustable mounting___________________Each 7.00



17060

17060 **Staining Apparatus—De Khotinsky's.** Provides clean, neat device for hot staining and fixing; enables one to fix smears of sputum, etc., without danger of burning, to stain them without danger of boiling the carbol fuchsin solution and also to avoid dropping carbol fuchsin over laboratory tables and floors; consists of asbestos wood frame, with base which withstands red heat without destruction; in bottom is sliding metal shelf, to be filled with sand to catch any drippings and to aid in reflecting all the heat upward from the heating units, of which there is one for every two slides; rheostat insures close heat regulation; heating units are easily replaced and are wound with nichrome wire, which is insoluble in boiling carbol fuchsin; slide carriers are nickel-plated brass frames, made to fit in asbestos wood frame at a suitable height above heaters; base is provided with leveling screws; set of fuses is placed on apparatus to obviate any danger from short circuit; outfit is intended for standard 3 x 1 in. slides and consists of heating box, slide carrier, tray, cross test level and 5 ft. of asbestos cord with two plugs; No. C has in addition the De Khotinsky thermo-regulating system for maintaining constant temperature in research work; in addition to its use in fixing and staining, it may be used as a hot plate for evaporating, concentrating, drying and boiling; it is very economical, requiring only 180 watts to maintain a temperature of 180°C over 82 sq. in. of aluminum plate; this form is made for 110 and 220-volt circuits; supplied for 110 volts, A. C., or 220 volts, D. C., at $2.50 additional; for 220 volts A. C. at $5.00.

No. A.	For 20 slides	Each	50.00
No. B.	For 10 slides	Each	40.00
No. C.	With thermo-regulator; for 20 slides	Each	90.00

(Please state voltage and current when ordering.)

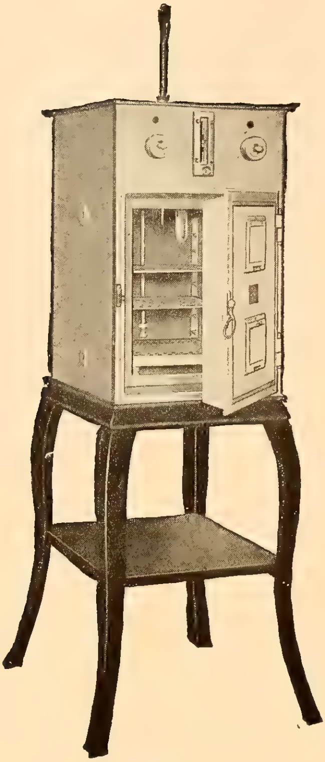
17061 **Extra Slide Carriers.** For Fixing and Hot Staining Apparatus above.

No. A.	For 20 slides	Each	4.00
No. B.	For 10 slides	Each	3.25
No. C.	With thermo-regulator; for 20 slides	Each	5.00

17065 **Starches—Authentic.** For the microscopical examination of foods, drugs and spices; prepared from carefully selected materials; when ordered in lots of even dozens, starches are supplied in neat cloth covered cases; varieties listed below — Each .50; Per dozen 6.00

17065

Arrowroot
Bean
Barley
Buckwheat
Corn
Oat
Pea
Potato
Rice
Rye
Sago
Tapioca
Wheat



17080

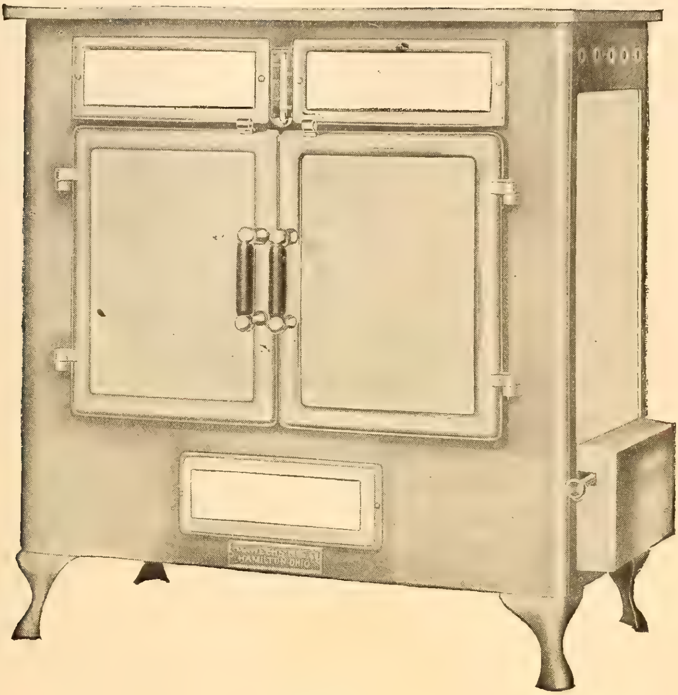
17070 **Sterilizer—Electric, Freas'.** Of same general construction, regulation, heating and range of temperature as Freas Electric Oven, described on page 342; supplied with flexible cord and plug to fit ordinary lighting circuit and with high-grade thermometer of special design and long stem, on which graduations are etched to 200°C; dimensions: height, 30 cm; width, 30 cm; depth, 30 cm; with iron base to stand on table --Each **115.00**

17075 **Sterilizer—Electric, Freas'.** Same as No. 17070 above, but with removable inside glass door and low wattage heating plate, in addition to regular heating plate, so that it may be used as incubator; with range from room temperature to 70°C------------------Each **135.00**

17080 **Sterilizer—Electric, Freas'.** Same as No. 17070 above, but on heavy iron base with legs; dimensions: height, 45 cm; width, 35 cm; depth, 42½ cm --Each **230.00**

17085 **Sterilizer—Electric, Freas'.** Of similar construction as Freas' Oven No. 16000-B, page 341, but with removable inside glass door and low wattage heating plate, in addition to regular heating plate, so that it may be used as incubator; with range from room temperature to 70° C --Each **230.00**

Incubators are listed on page 227 and pages following



17090

17090 **Sterilizers—Hot Air.** Automatically temperature-controlled; set to shut off at 176° C before leaving factory, but can be regulated by thumb screw; furnished complete, with instructions; electrically heated.

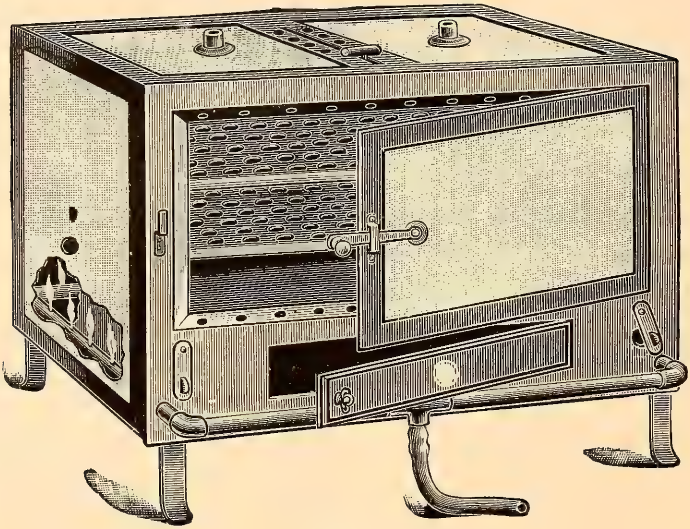
No.	A	B	C
Inside Dimensions			
Height, mm	125	125	325
Width, mm	375	500	500
Depth, mm	175	300	300
Each	**85.00**	**150.00**	**225.00**

17005 **Sterilizers—Hot Air.** Same as No. 17090 above, but gas heated.

No.	A	B
Inside Dimensions		
Height, mm	150	325
Width, mm	500	500
Depth, mm	300	300
Each	**150.00**	**225.00**

17100 **Sterilizers—Hot Air.** Same as No. 17090, but gasoline heated; inside dimensions: height, 150 mm; width, 500 mm; depth, 300 mm____Each **150.00**

See also Ovens, beginning on page 341



17105

17105 Sterilizers—Hot Air. Made with double wall of sheet iron and covered with asbestos; can be heated by row of small Bunsen burners around the sides of the base, thus insuring even circulation of heat; air is introduced through openings on each side; supplied with two shelves; for gas, but without equipment.

No.	A	B
Height, inside, cm	45	31
Width, inside, cm	60	61
Depth, inside, cm	35	31
Each	**66.00**	**54.00**

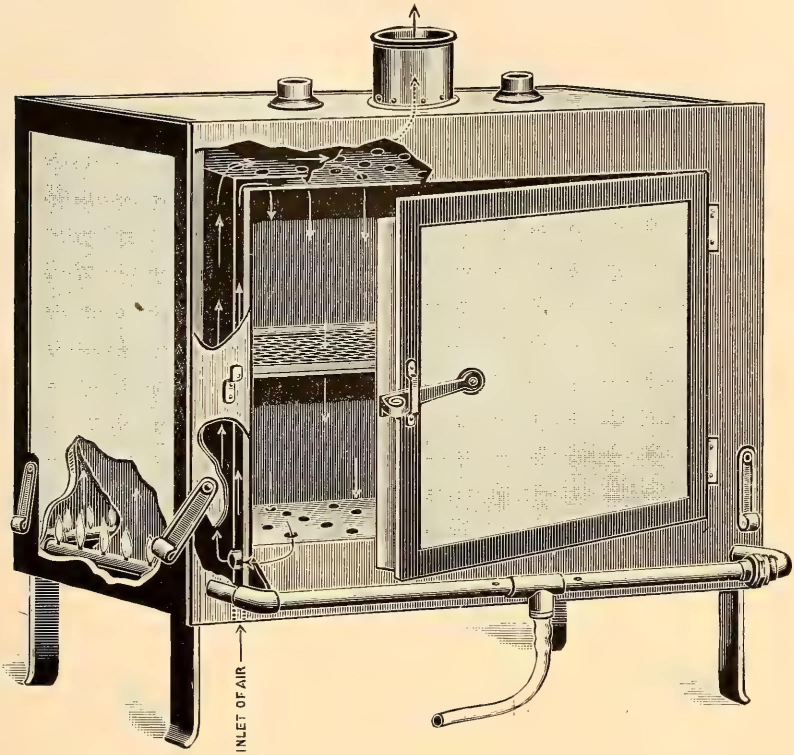
17110 Sterilizers—Hot Air. Same as No. 17105 above, but with gas equipment, including Reichert's thermo-regulator, thermometer graduated to 200° C and 6 ft. of metallic tubing.

No.	A	B
Height, inside, cm	45	31
Width, inside, cm	60	61
Depth, inside, cm	35	31
Each	**71.25**	**59.25**

17115 Sterilizers—Hot Air, Lautenschlager's. Very efficient, being constructed with three walls, providing two air spaces, through which currents of hot air pass continuously in the direction indicated by the arrows in illustration; can be heated by row of small Bunsen burners between the outer walls; even temperature is maintained, and there is no danger of withdrawing the temper from any instrument placed near the wall of the oven; sterilizer is constructed of Russian iron, covered with asbestos; temperature of 150° C can be attained within fifteen minutes; for gas, **but without equipment.**

No.	A	B	C	D
Height, inside, cm	75	60	45	30
Width, inside, cm	90	75	60	45
Depth, inside, cm	50	45	35	23
Each	**172.50**	**142.50**	**67.50**	**48.00**

For Illustration of No. 17115 See Following Page.



17115

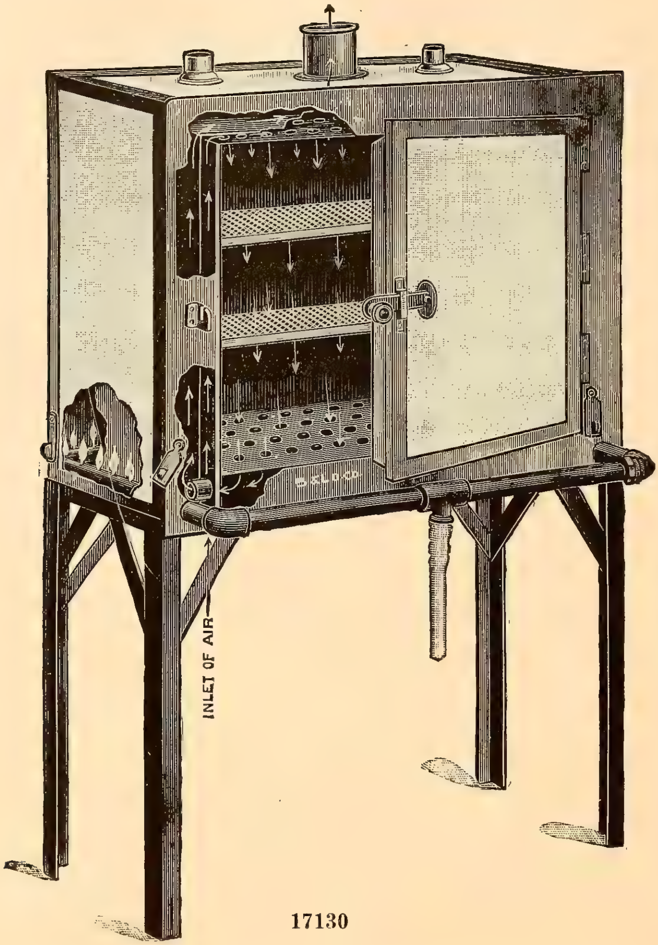
17120 **Sterilizers—Hot Air, Lautenschlager's.** Same as No. 17115 above, but with gas equipment, including Reichert's Thermo-regulator, thermometer graduated to 200° C and 6 ft. of metallic tubing.

No.	A	B	C	D
Height, inside, cm	75	60	45	30
Width, inside, cm	90	75	60	45
Depth, inside, cm	50	45	35	23
Each	177.75	147.75	72.75	53.25

17125 **Sterilizers—Hot Air, Lautenschlager's.** Similar to No. 17115 above, but with electric equipment, consisting of four or five units, according to size of outfit, made from Nichrome resistance material, which does not oxidze when heated, insulated with natural mica, sheathed in copper and outside with tinned iron, making a practically indestructible heater; units are distributed over bottom of the sterilizer to insure uniform heating and are readily removable; they are controlled by two 3-heat, indicating snap switches, mounted outside the sterilizer and providing for seven heats; maximum heat brings sterilizer to desired temperature very quickly, and intermediate heats maintain this temperature; half the number of units are controlled by each switch.

No.	A	B	C	D
Height, inside, cm	75	60	45	30
Width, inside, cm	90	75	60	45
Depth, inside, cm	50	45	35	23
Each	352.50	300.00	187.50	157.50

(Please state voltage and current when ordering.)



17130

17130 **Sterilizers—Hot Air, Lautenschlager's.** Same at No. 17115 above, but mounted on a 61 cm stand and provided with three shelves; for gas, but without equipment.

No.	A	B
Height, inside, cm	75	60
Width, inside, cm	90	75
Depth, inside, cm	50	45
Each	**187.50**	**157.50**

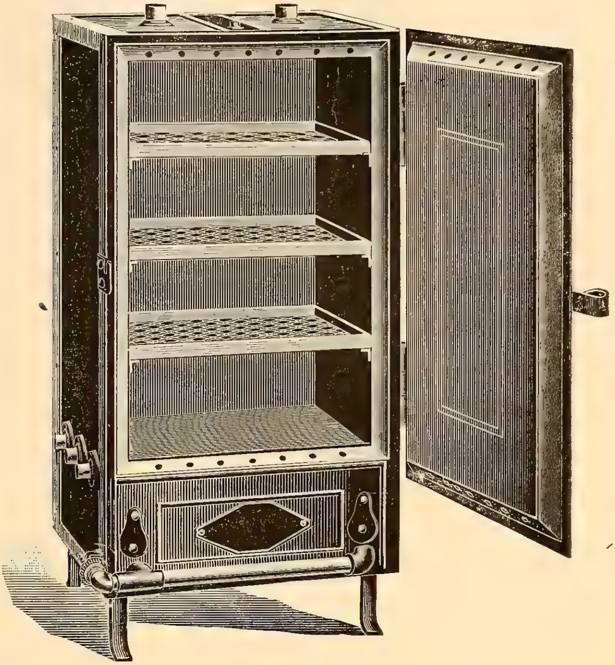
17135 **Sterilizers—Hot Air, Lautenschlager's.** Same as No. 17130 above, but with gas equipment similar to that furnished with No. 17120.

No.	A	B
Height, inside, cm	75	60
Width, inside, cm	90	75
Depth, inside, cm	50	45
Each	**192.75**	**162.75**

17140 **Sterilizers—Hot Air, Lautenschlager's.** Same as No. 17130 above, but with electric equipment similar to that furnished with No. 17125.

No.	A	B
Height, inside, cm	75	60
Width, inside, cm	90	75
Depth, inside, cm	50	45
Each	**367.50**	**315.00**

(Please state voltage and current when ordering.)

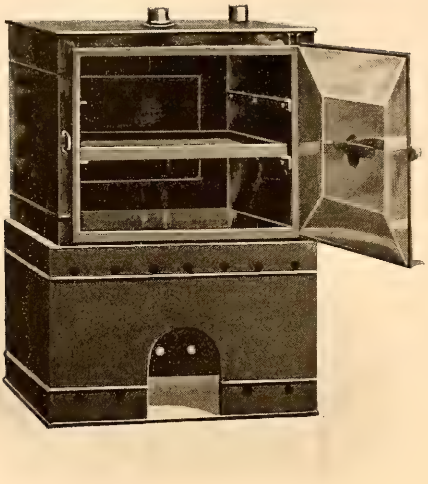


17145

17145	**Sterilizer—Hot Air.** Well insulated with true asbestos making the apparatus economical in the use of heat and making temperature more constant; heated by series of small Bunsen burners enclosed in base, height inside, 48 cm: width, 30 cm; depth, 24 cm; for gas but without equipment	Each	39.75
17148	**Sterilizer—Hot Air.** Same as No. 17145 above, but with gas equipment, including Reicherts' thermo-regulator, thermometer graduated to 200 deg. C and 6 feet of metallic tubing	Each	45.00
17150	**Sterilizer—Hot Air.** Same as No. 17145 above, but with electric heating unit and equipment	Each	81.00

BACTERIOLOGICAL MATERIALS

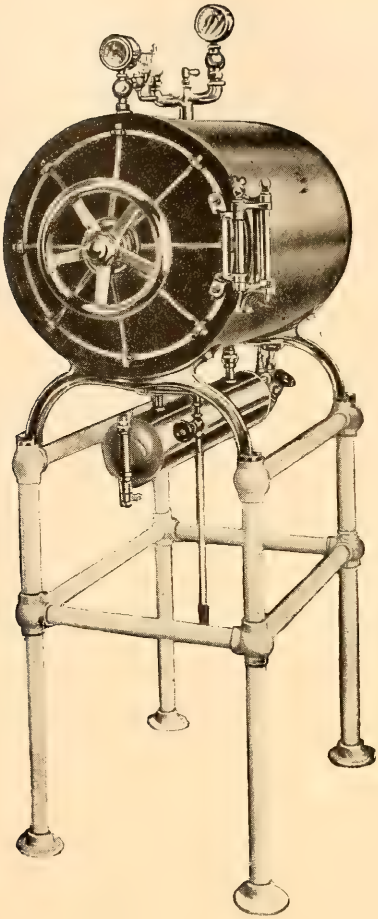
Such materials as stains, media, rare sugars, indicators and nutrient materials have received careful study and attention on our part. These we put out under the registered name "Bioloid." Specify "Bioloid" when ordering, you will find the quality to be of the highest.



17160

17155	**Sterilizer—Hot Air.** Similar in construction to No. 17145 on the preceding page, but of smaller size and without built in burner. Height inside, 24 cm; width, 30 cm; depth, 24 cm; for gas but without equipment ---------- Each	21.00
17156	**Sterilizer—Hot Air.** Same as No. 17155 above, but with gas equipment, including Reicherts' thermo-regulator, thermometer graduated to 200 deg. C, a Fletcher radial burner and 6 feet of metallic tubing--- Each	28.75
17157	**Sterilizer—Hot Air.** Same as No. 17155 above, but with electric equipment ---------- Each	55.00
17160	**Sterilizer—Hot Air, Physicians'.** Designed to meet requirements of physicians and small laboratories; so constructed that uniform temperature is easily maintained in sterilizing chamber; made of sheet iron, with double doors giving ample space for circulation of hot air about chamber; has ventilating slide on top and extra bottom for gas burners to prevent flame from striking directly on bottom of sterilizing chamber; provided with two removable trays and tubulations for thermometer and thermo-regulator; for gas, but without equipment ---------- Each	16.00
17165	**Sterilizer—Hot Air, Physicians'.** Same as No. 17160 above, but with gas equipment consisting of one Bunsen burner, Reichert's thermo-regulator, thermometer graduated to 200° C and 6 feet of metallic tubing ---------- Each	21.75
17170	**Sterilizer—Hot Air, Physicians'.** Same as No. 17160 above, but with electric equipment described on page — ---------- Each	40.00

(Please state voltage and current when ordering.)

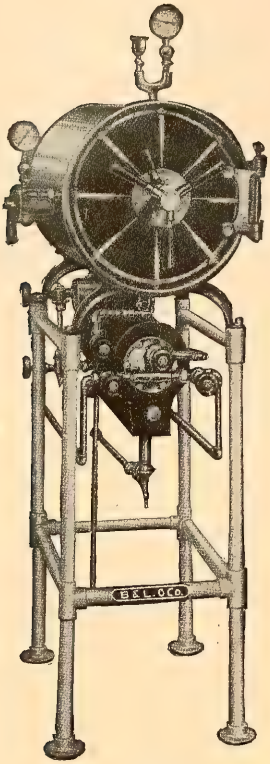


17175

17175 Sterilizers—Steam Pressure, American. Cylindrical form, with simple but durable and efficient construction; provided with ebony enameled bronze door and frame with copper ends; walls are of seamless drawn brass, tinned inside; steam is admitted to inner chamber by a valve in the center of the back and is generated in an independent generator; mounted on a white enameled, tubular steel stand; can be heated by steam, gas, electricity or petroleum; the mode of heating to be used should be specified when ordering.

No.	A	B	C	D	E	F
Length, inside, cm	81	71	61	56	51	48
Diameter, inside, cm	61	51	41	35	30	23
Each	**900.00**	**600.00**	**475.00**	**400.00**	**325.00**	**250.00**

Note. Above prices are for Sterilizers heated by gas or by steam. For heating by gas and steam combined, add $10.00 to list price. Electrically heated Sterilizers quoted upon application.



17180

17180 **Sterilizers—Pressure.** Constructed of two seamless, drawn shells, an outer and inner shell, which are made of copper and brass, respectively; space between shells acts as steam jacket and surrounds sterilizing chamber, except at door opening control is accomplished by an operating valve connected to steam jacket and easily accessible; door is of heavy bronze casting; has patented steam generator to be suspended beneath sterilizer; mounted on a sanitary tubular steel stand; for steam or gas, please specify which is desired.

No.	A	B	C	D	E
Length, inside, cm	50	40	35	30	23
Diameter, inside, cm	70	60	55	50	48
Each	**680.00**	**530.00**	**460.00**	**370.00**	**300.00**

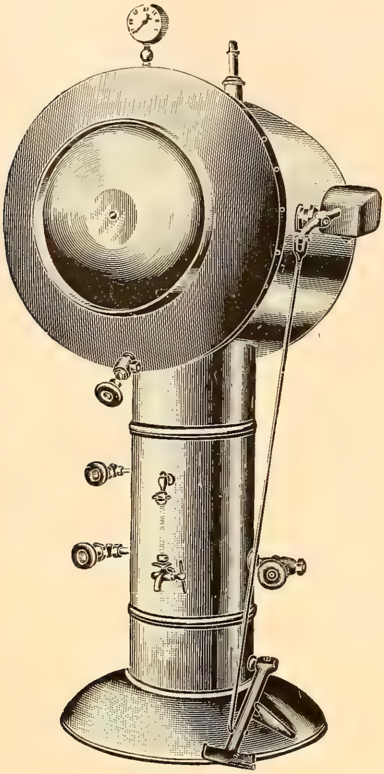
17185 **Sterilizers—Pressure.** Same as No. 17180 above, but for steam and gas combined.

No.	A	B	C	D	E
Length, inside, cm	50	40	35	30	23
Diameter, inside, cm	70	60	55	50	48
Each	**690.00**	**540.00**	**470.00**	**380.00**	**310.00**

17190 **Sterilizers—Pressure.** Same as No. 17180 above, but for electricity.

No.	A	B	C	D	E
Length, inside, cm	50	40	35	30	23
Diameter, inside, cm	70	60	55	50	48
Each	**730.00**	**580.00**	**510.00**	**415.00**	**345.00**

(Please state voltage and current when ordering.)



17195

17195 **Sterilizers—Steam Pressure.** Possess several pronounced advantages; door of sterilizing chamber is operated by foot-power, so gloved hands of operator are not brought in contact with unsterile metal; pedistal base, of nickel-plated copper and lined with asbestos to conserve heat, surrounds steam generator and eliminates dirt-collecting stands and pipes; door has ground joint which is steam-tight and requires no fastening; foot pressure on the pedal locking it, while steam pressure in chamber keeps it locked; for gasoline.

No.	A	B	C	D	E
Length, cm	76	71	71	61	51
Diameter, cm	71	66	58	53	43
Diameter of Door, cm	46	41	36	31	25
Each	**540.00**	**495.00**	**366.50**	**264.00**	**220.00**

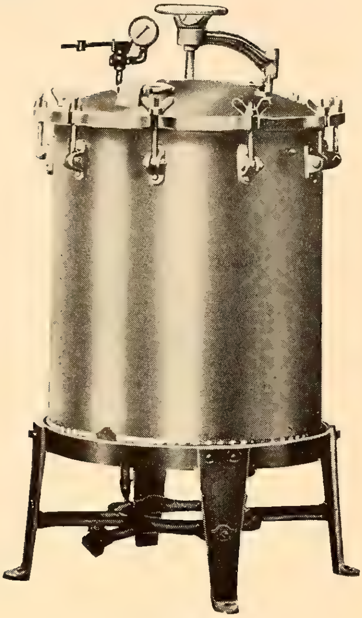
17200 **Sterilizers—Steam Pressure.** Same as No. 17195 above, but for steam or gas.

No.	A	B	C	D	E
Length, cm	76	71	71	61	51
Diameter, cm	71	66	58	53	43
Diameter of Door, cm	46	41	36	31	25
Each	**500.00**	**450.00**	**340.00**	**240.00**	**200.00**

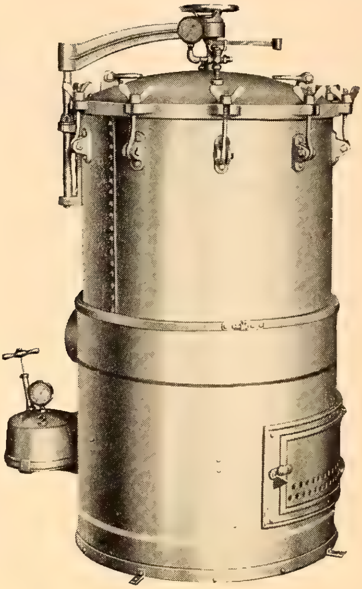
17205 **Sterilizers—Steam Pressure.** Same as No. 17195 above, but for electricity.

No.	A	B	C	D	E
Length, cm	76	71	71	61	51
Diameter, cm	71	66	58	53	43
Diameter of Door, cm	46	41	36	31	25
Each	**566.50**	**496.50**	**375.00**	**270.00**	**225.00**

(Please state voltage and current when ordering.)



17215



17220

17210 **Sterilizers—High Pressure, National.** Made of steel boiler plate brazed and riveted, with cover of semi-steel casting; has basket to hold articles being sterilized; high grade steam gauge registers pressure generated up to 30 pounds, and complete sliding weight safety valve as well as steam circulating device form part of equipment; covered inside and out with aluminum coating; cover lifting device is supplied on two larger sizes; supplied with thumb nut wrench for fastening and unfastening cover; without burner, but on four legs, adjustable for height.

No.	A	B	C
Height, basket, cm	55	38	33
Diameter, basket, cm	53	35	29
Each	**135.00**	**72.50**	**55.00**

17215 **Sterilizers—High Pressure, National.** Same as No. 17210 above, but with gas burner mounted on stand.

No.	A	B	C
Height, basket, cm	55	38	33
Diameter, basket, cm	53	35	29
Each	**165.00**	**100.00**	**70.00**

17220 **Sterilizers—High Pressure, National.** Same as No. 17210 above, but with enclosed base and gasoline burner; largest size is 135 cm high and 102 cm wide; the medium, 103 cm high by 76 cm wide; and the small, 1 meter by 66 cm.

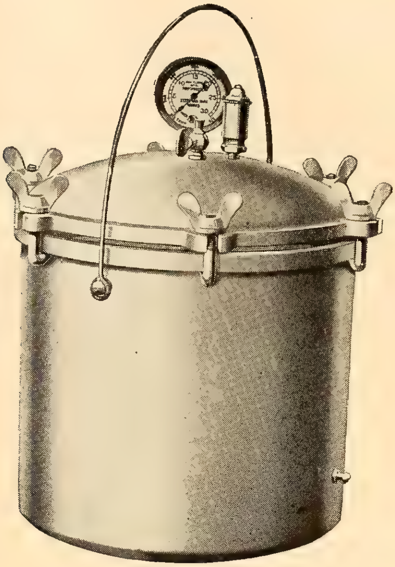
No.	A	B	C
Height, basket, cm	55	38	83
Diameter, basket, cm	53	35	29
Each	**165.00**	**100.00**	**70.00**

17225 **Sterilizers—High Pressure, National.** Same as No. 17210 above, but with steam coil.

No.	A	B	C
Height, basket, cm	55	38	83
Diameter, basket, cm	53	35	29
Each	**165.00**	**100.00**	**70.00**

17230 **Sterilizers—High Pressure, National.** Same as No. 17210 above, but with gas burner and steam coil.

No.	A	B	C
Height, basket, cm	55	38	83
Diameter, basket, cm	53	35	29
Each	170.00	105.00	75.00



17240

17240 **Sterilizer—Pressure, Aluminum.** Especially adapted for first aid hospitals, bacteriolical work and physicians' and dentists' office work; equipped with polished brass fittings, petcock, automatic safety valve and steam gauge; safety valve can be adjusted to automatically blow off steam at anywhere from 3 to 20 pounds pressure; petcock insures uniform circulation of steam; can be heated over an electric plate, gas flame or oil burner; is 275 mm high and 300 mm in diameter..Each **45.00**

17242 **Sterilizer—Pressure, Aluminum.** Same as No. 17240, but equipped with wire rack instead of copper crate and without petcock inside for steam circulation.

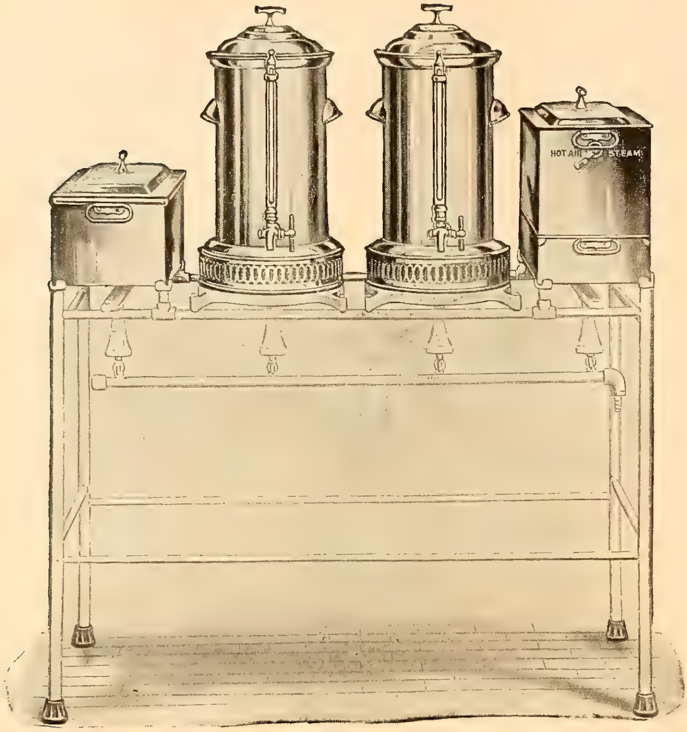
No.	A	B	C
Capacity, liters	10	17	25
Height (inside) mm	205	255	280
Diameter (inside), mm	225	275	305
Each	**25.00**	**30.00**	**40.00**

CULTURE MEDIA

These are obtainable from us in any quantity or form of container. These media are prepared under our special supervision in accordance with Standard Methods A. P. H. A.

Not only these, but specially prepared media, or synthetic media, or media of any desired concentration or reaction is obtainable.

Prices on application.



17245

17245 **Sterilizers—Complete Apparatus for Dressings and Instruments and for Supplying Hot and Cold Sterile Water.** Sterilizers are of heavy cold-rolled copper, nickeled-plated on outside and coated with pure block tin on inside; water sterilizers have protected water gauge and three-way draw-off faucet; stands are tubular steel, finished in polished white enamel; supplies hot and cold sterile water and sterilizes all instruments; dressings, bandages and gowns are sterilized by forcing live steam through them in such a way as to insure absolute penetration, and dried by hot air before and after sterilization; both hot air and steam controlled by a single valve; for gas.

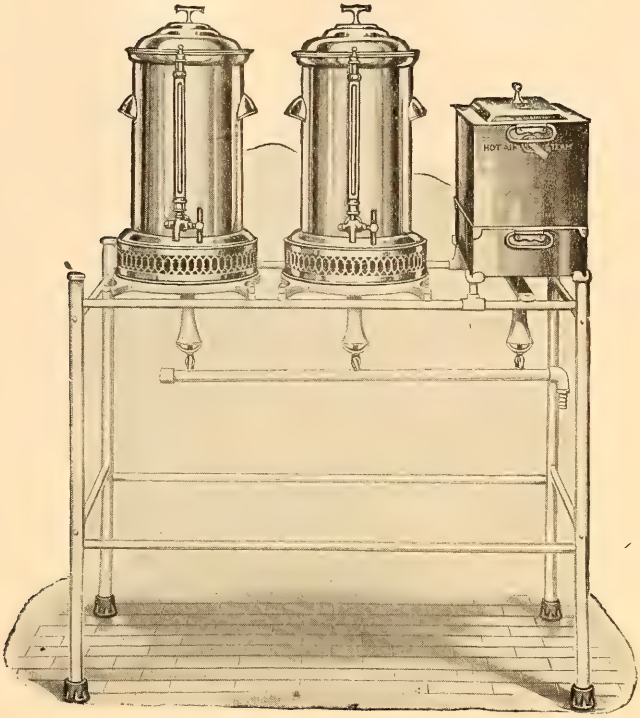
	Hospital Size	**Physicians' Size**	**Specialists' Size**
	No. A	**B**	**C**
Floor Space, cm	137 x 65	54 x 46	91 x 32
Dressing Sterilizer, cm	56 x 25 x 25	41 x 17 x 18	25 x 11 x 11
Instrument Sterilizer, cm	61 x 31 x 18	43 x 20 x 13	28 x 14 x 9
Water Sterilizers, gals., each	5	3	2
Each	**170.00**	**92.50**	**62.00**

17265 **Sterilizers—Complete Apparatus for Dressings and Instruments and for Supplying Hot and Cold Sterile Water.** Same as No. 17245, but for electricity.

	Hospital Size	**Physicians' Size**	**Specialists' Size**
	No. A	**B**	**C**
Floor Space, cm	137 x 65	54 x 46	91 x 32
Dressing Sterilizer, cm	56 x 25 x 25	41 x 17 x 18	25 x 11 x 11
Instrument Sterilizer, cm	61 x 31 x 18	43 x 20 x 13	28 x 14 x 9
Water Sterilizers, gals., each	5	3	2
Each	**312.50**	**190.00**	**137.50**

(Please state voltage and current when ordering.)

The above Sterilizers can be furnished with gasoline, alcohol or steam heating equipment if desired. Prices on request.



17270

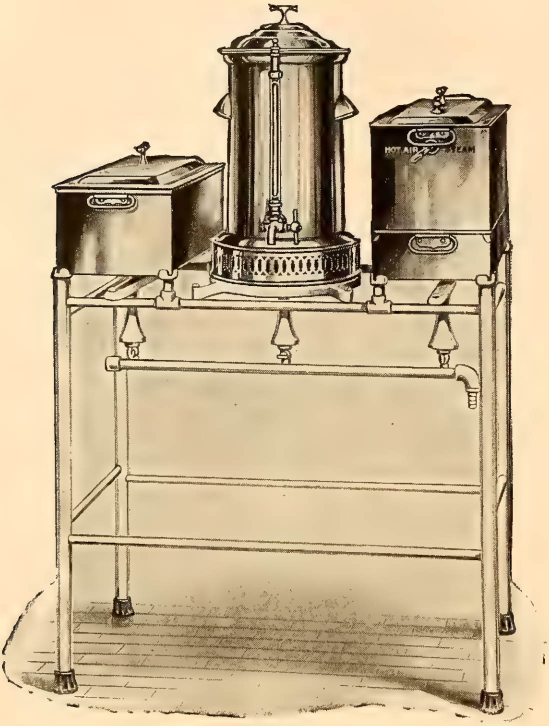
17270 **Sterilizers—Complete Apparatus for Dressings and Instruments and for Supplying Hot and Cold Sterile Water. Four Piece Type.** Similar to No. 17245, but with single combination sterilizer, by which dressings, etc., are steam-sterilized and dried in the chamber while instruments are being boiled in the base; provided with wire racks for holding articles in the sterilizer; for gas.

	Hospital Size No. A	Physicians' Size B	Specialists' Size C
Floor Space, cm	112 x 64	89 x 46	76 x 31
Dressing Sterilizer, cm	56 x 25 x 25	41 x 17 x 18	25 x 11 x 11
Instrument Sterilizer, cm	61 x 31 x 13	43 x 20 x 9	28 x 14 x 6
Water Sterilizers, gals., each	5	3	2
Each	**122.00**	**74.50**	**53.50**

17290 **Sterilizers—Complete Apparatus for Dressings and Instruments and for Supplying Hot and Cold Sterile Water. Four Piece Type.** Same as 17270, but for electricity.

	Hospital Size No. A	Physicians' Size B	Specialists' Size C
Floor Space, cm	112 x 64	89 x 46	76 x 31
Dressing Sterilizer, cm	56 x 25 x 25	41 x 17 x 18	25 x 11 x 11
Instrument Sterilizer, cm	61 x 31 x 13	43 x 20 x 9	28 x 14 x 6
Water Sterilizers, gals., each	5	3	2
Each	**220.00**	**147.50**	**110.00**

The above Sterilizers can be furnished with gasoline, alcohol or steam heating equipment if desired. Prices on request.



17295

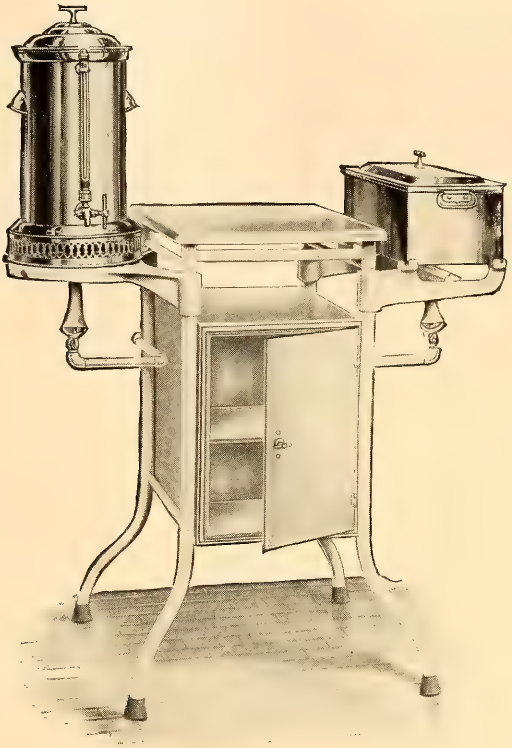
17295 **Sterilizers—Dressing, Water and Instrument.** Similar to No. 17270, except that dressing sterilizer can be removed to the home of the patient for use as a combination sterilizer; while dressings are steam sterilized and dried in the chamber, instruments can be boiled in the base; for gas.

	Hospital Size	Physicians' Size	Specialists' Size
	No. A	**B**	**C**
Floor Space, cm	109 x 65	81 x 46	66 x 31
Dressing Sterilizer, cm	56 x 25 x 25	41 x 17 x 18	25 x 11 x 11
Instrument Sterilizer, cm	61 x 31 x 18	43 x 20 x 13	28 x 14 x 9
Water Sterilizers, gals., each	5	3	2
Each	**140.00**	**73.00**	**48.00**

17315 **Sterilizers—Dressing, Water and Instrument.** Same as No. 17295, but for electricity.

	Hospital Size	Physicians' Size	Specialists' Size
	No. A	**B**	**C**
Floor Space, cm	109 x 65	81 x 46	66 x 31
Dressing Sterilizer, cm	56 x 25 x 25	41 x 17 x 18	25 x 11 x 11
Instrument Sterilizer, cm	61 x 31 x 18	43 x 20 x 13	28 x 14 x 9
Water Sterilizers, gals., each	5	3	2
Each	**250.00**	**144.00**	**105.00**

The above Sterilizers can be furnished with gasoline, alcohol or steam heating equipment if desired. Prices on request.



17320

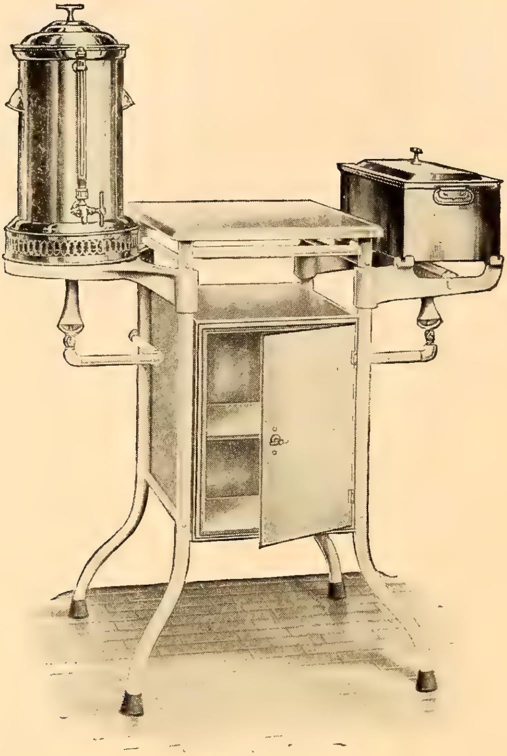
17320 **Sterilizers—Instrument and Water.** Similar to No. 17295, but mounted on special table and designed to economize space, being especially suitable for small offices; for sterilizing instruments and supplying sterile water only; for gas.

	Physicians' Size	**Specialists' Size**
	No. A	**B**
Floor Space, cm	61 x 92	48 x 79
Instrument Sterilizer, cm	43 x 20 x 13	28 x 14 x 9
Water Sterilizer, gal.	3	2
Porcelain Enamel Top, cm	41 x 51	36 x 36
Cabinet, cm	31 x 38 x 45	24 x 41 x 31
Each	**63.00**	**51.00**

17340 **Sterilizers—Instrument and Water.** Same as No. 17320, but for electricity.

	Physicians' Size	**Specialists' Size**
	No. A	**B**
Floor Space, cm	61 x 92	48 x 79
Instrument Sterilizer, cm	43 x 20 x 13	28 x 14 x 9
Water Sterilizer, gal.	3	2
Porcelain Enamel Top, cm	41 x 51	36 x 36
Cabinet, cm	31 x 38 x 45	24 x 41 x 31
Each	**108.00**	**86.00**

The above Sterilizers can be furnished with gasoline, alcohol or steam heating equipment if desired. Prices on request.



17345

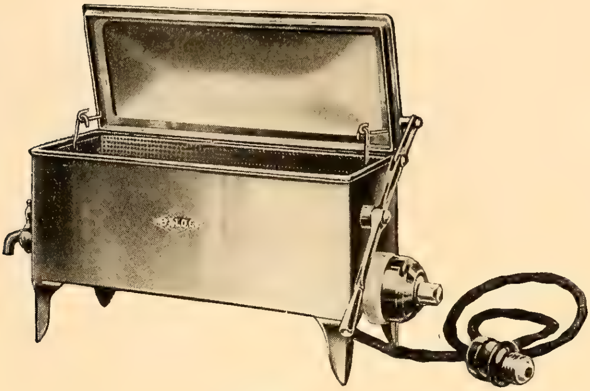
17345 Sterilizers—Combination Dressing, Instrument and Water. Similar to No. 17320, except that it is mounted on special table and designed to economize space; has aseptic, sheet steel cabinet beneath table; has a combination sterilizer, so that dressings and gowns can be sterilized as well as instruments; for gas.

	Physicians' Size	**Specialists' Size**
	No. A	**B**
Floor Space, cm	61 x 96	48 x 79
Base for Instruments, cm	42 x 20 x 9	29 x 14 x 7
Water Sterilizer, gal.	3	2
Porcelain Enamel Top, cm	41 x 51	36 x 36
Cabinet, cm	36 x 38 x 45	24 x 41 x 31
Each	**73.00**	**58.00**

17365 Sterilizers—Combination Dressing, Instrument and Water. Same as No. 17345, but for electricity.

	Physicians' Size	**Specialists' Size**
	No. A	**B**
Floor Space, cm	61 x 92	48 x 79
Base for Instruments, cm	42 x 20 x 9	29 x 14 x 7
Water Sterilizer, gal.	3	2
Porcelain Enamel Top, cm	41 x 51	36 x 36
Cabinet, cm	36 x 38 x 45	24 x 41 x 31
Each	**117.00**	**92.00**

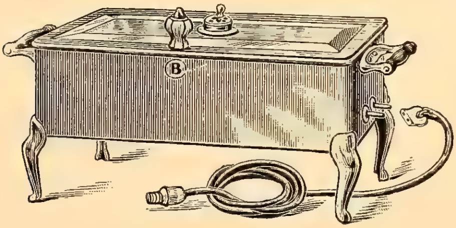
The above Sterilizers can be furnished with gasoline, alcohol or steam heating equipment if desired. Prices on request.



17370

17370 **Sterilizers—Instrument, Electric.** Have four desirable features: perforated tray, carrying the instruments, is lifted out of boiling solution as cover opens, so that instruments drain and cool; lifting handles operates away from steam, and hand cannot be burned; three degrees of heat are obtained by convenient, control switch; electric current is automatically cut off if water in sterilizer is accidentally allowed to evaporate; made of heavy copper, with water faucet, legs and lifting handle of brass; all parts handsomely nickel-plated.

Length, inside, cm	27	33	41
Width, inside, cm	13	13	15
Depth, inside, cm	8	8	9
Each	25.50	28.50	31.50

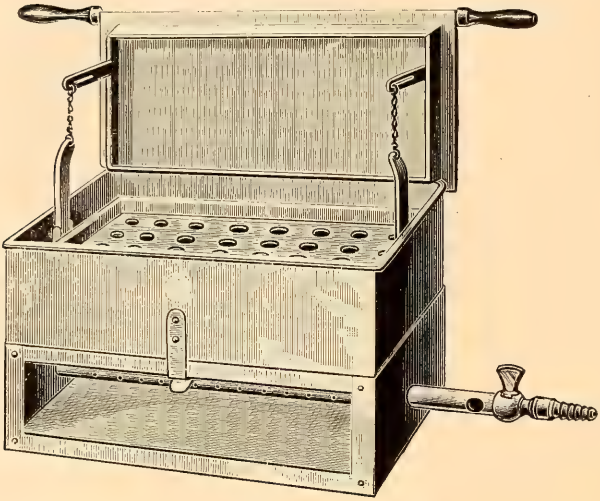


17375

17375 **Sterilizers—Instrument, Electric.** Made of extra heavy copper, nickel-plated and double tin-lined; provided with hinged lid, ventilator and automatic cut-out; perforated trays are supplied; heating element is of new pattern, which does not require renewal and has no exposed wires; automatic cut-out shuts off current, when sterilizer is allowed to run dry; hinged lid, with glass knob and ventilator, prevents any dripping when opening sterilizer; operates on direct or alternating current and 110 or 220-volt circuits.

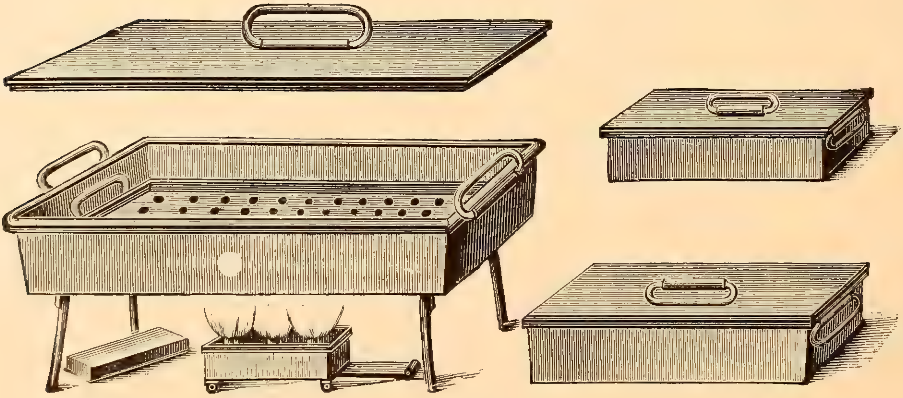
No.	A	B	C	D	E	F	G	H
Height, inside, cm	13	9	9	8	8	6	6	5
Width, inside, cm	46	38	38	31	31	25	25	20
Depth, inside, cm	19	17	17	13	13	12	12	9
Heat Graduations	1	3	1	3	1	3	1	1
Each	57.75	34.50	33.00	30.00	28.50	26.25	24.75	20.25

(Please state voltage and current when ordering.)



17380

17380 **Sterilizer—Instrument, Lewis.** Gas-heated; tray for instruments is attached to lid, and when latter is lifted tray is also raised out of water and held in position; tray is removable for cleaning; after use, instruments can be placed on tray, which is later immersed and lid closed for sterilization; made entirely of copper, nickel-plated, and mounted on base with gas burner, inside dimensions: height, 8 cm; width, 25 cm; depth, 13 cm ---------------------------------- Each **21.00**

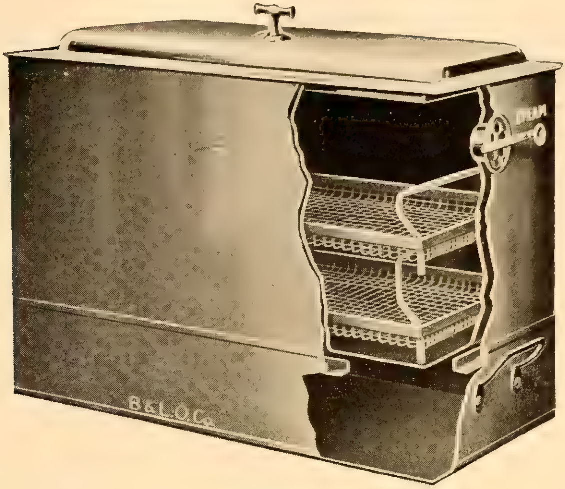


17385

17385 **Sterilizer—Instrument, Rotter's Portable.** Consists of three pans with perforated trays and covers, folding stand, 8 cm high, and alcohol lamp filled with asbestos, for which no wick is required; dimensions of pans: 17 x 11 x 3 cm, 23 x 13 x 4 cm and 33 x 15 x 6 cm.

No. A. Polished copper -------------------------------------- Each **15.00**

No. B. Nickel-plated -- Each **17.25**



17390

17390 Sterilizers—Combination. Portable sterilizer so designed that instruments may be steam sterilized and then dried by hot air; double-wall construction makes it possible to heat and dry dressings with hot air without having products of combustion enter sterilizing chamber; instruments may be sterilized in base of apparatus at the same time the dressings are being sterilized in the chamber above; or base with cover and one rack may be used separately as instrument sterilizer; valve on end of sterilizer controls the steam and hot air; made of polished copper, tin-lined.

Sterilizing Chamber:

	No. A	B	C	D	E
Length, cm	55.6	45.7	40.7	35.5	25.4
Width, cm	25.4	19.0	17	15.2	11.5
Depth, cm	25.4	20.3	17.8	15.2	11.5
Each	**63.00**	**31.00**	**26.00**	**23.00**	**14.50**

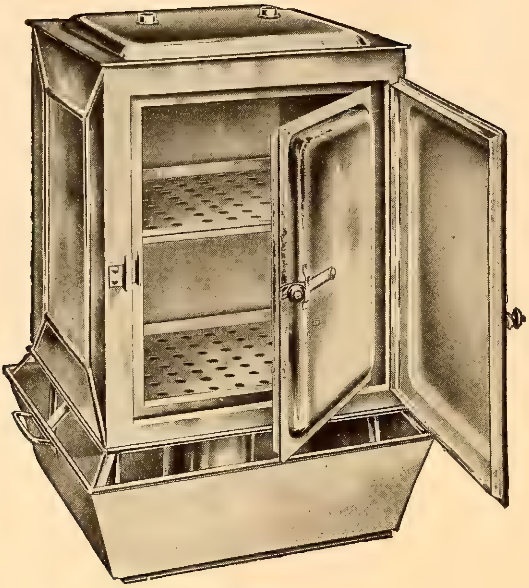
17395 Sterilizers—Combination. Same as No. 17390 above, but of nickeled-plated copper, and with electric heater contained in base and providing for three different degrees of heat.

Sterilizing Chamber:

	No. A	B	C	D	E
Length, cm	55.6	45.7	40.7	35.5	25.4
Width, cm	25.4	19.0	17	15.2	11.5
Depth, cm	25.4	20.3	17.8	15.2	11.5
Each	**100.00**	**58.00**	**48.00**	**41.50**	**32.50**

(Please state voltage and current when ordering.)

We carry a complete line of Incubators, Ovens, Sterilizers and Bacteriological Equipment.

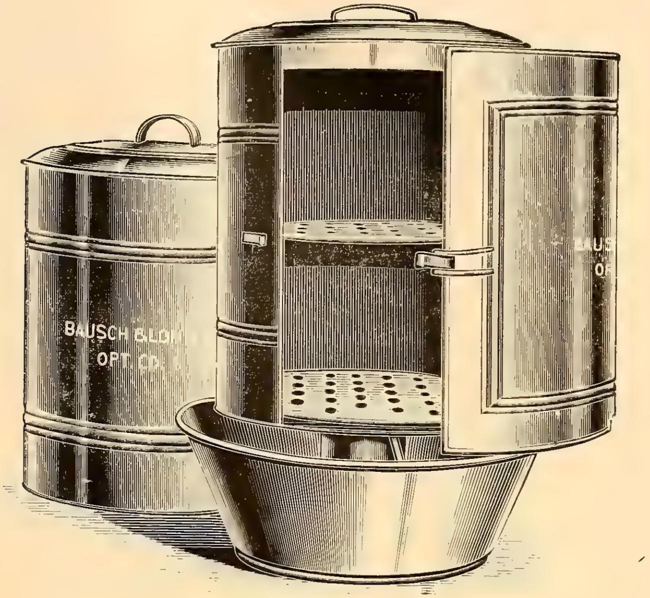


17400

17400 **Sterilizer—Arnold Steam.** Boston Board of Health form; square, and constructed with side door; large size renders it well suited to requirements of Board of Health laboratories, and it has been found to be very serviceable and convenient; made of copper throughout, following the same principles as employed in construction of other sterilizers; with steam equipment.

No.	A	B	C
Height, inside, cm	49	38	37
Width, inside, cm	41	31	22
Depth, inside, cm	36	31	23
Each	97.50	65.00	60.00

The selection of Laboratory Equipment, particularly incubators, autoclaves, sterilizers, ovens and similar apparatus, is made difficult, owing to peculiar needs of the special laboratory. There exists doubt quite often as to the best-suited piece of apparatus. May we advise you in this regard?



17405

17405 **Sterilizers—Arnold Steam.** Round form, with side door; side door increases convenience in use, since both lower and upper chambers are accessible separately; has two removable, perforated disks; the small quantity of water heated at one time in shallow portion of base is advantageous feature, since steam is generated more quickly and action is continuous; constant temperature of 100° C can be maintained in all parts of chamber without any particular attention being required; made of polished copper.

No.	A	B
Height, inside, cm	31	29
Diameter, inside, cm	28.5	26.5
Each	**29.50**	**27.50**

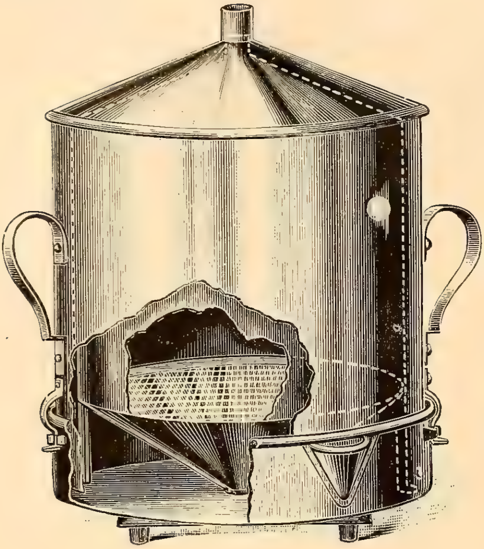
17410 **Sterilizers—Arnold Steam.** Same as No. 17405 above, but of heavy tin, with copper bottom.

No.	A	B	C
Height, inside, cm	31	29	18.5
Diameter, inside, cm	28.5	26.5	21.5
Each	**12.50**	**11.00**	**9.00**

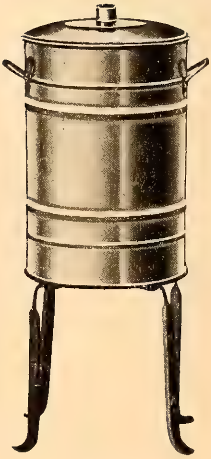
Specify "Bioloid" when ordering Reagents, Stains and Biological Materials.

BIOLOID

Look for this mark. It is a guarantee of highest quality.



17415



17420

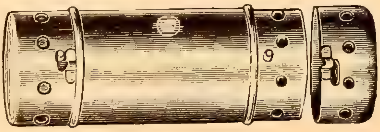
17415 **Sterilizer—Hospital, Boeckmann's.** Inner chamber has extra cover to protect it from dripping of condensed steam, which collects in outer cover; chamber is large enough to sterilize articles for several capital operations; products may be dry-steam sterilized by simply removing cork from outer cover and continuing the heat for ten minutes; dimensions of inner chamber: diameter, 38 cm; height, 33 cm.

No. A. Of polished copper ---------- Each 37.50

No. B. Nickel-plated ---------- Each 42.00

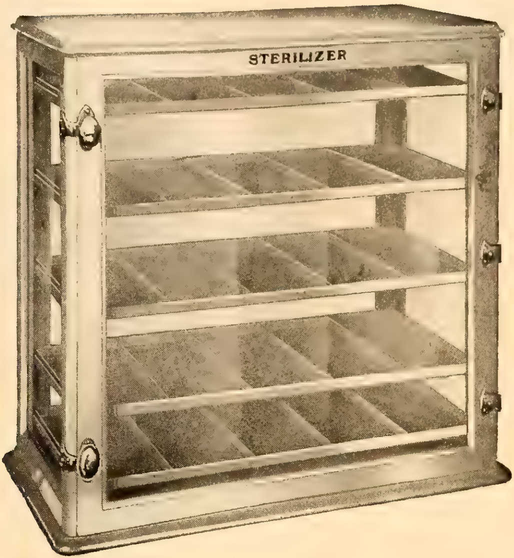
17420 **Sterilizer—Physicians' Steam.** Has removable, horizontal partition, upon which articles to be sterilized in upper chamber are placed; partition has perforations for holding test tubes and to allow free circulation of heat within chamber; rings extend around inner circle of cylinder to prevent moisture formed by condensation from coming into contact with cotton plugs, etc.; made of copper and supplied with sheet iron base and asbestos mat; dimensions of sterilizing chamber: depth, 30 cm; diameter, 20 cm; without heating equipment ---------- Each 12.00

17425 **Sterilizer—Physicians' Steam.** Same as No. 17420 above, but with gas equipment, consisting of Bunsen burner, chemical thermometer graduated to 150° C and 6 feet of metallic tubing ---------- Each 14.00



17427

17427 **Sterilizing Box.** Cylindrical; top and bottom are perforated on sides to meet perforations in cylinder; after sterilization box is sealed by turning end collars; made of polished copper, nickel-plated; diameter, 8 cm; length, 20 cm ---------- Each 2.40



17430

17430 **Sterilizers—Cabinet.** Formaldehyde sterilizer of proper design, for delicate instruments, which would be injured by steam sterilizing, or for sterilizing instruments containing rubber, for gas inhalers, etc., which cannot be rendered aseptic by hot air or boiling water; requires little or no attention, other than to keep a piece of blotting paper, moistened with 40% solution of formaldehyde in tray furnished for the purpose; about 30 minutes is required to render instruments aseptic, and operating cost should not exceed 3 or 4 cents a week; frames are made entirely of wood to insure perfectly air-tight cabinet; apparatus is hand-finished, and best procurable enamel is used, cabinets being readily cleaned with soap and water without injury to finish; cabinets are finished in white enamel with nickel-plated fittings; Nos. A and B have 5 and No. C has 4 white enameled steel trays; made with glass paneled sides, back and door. Oak cabinets with polished brass hardware will be furnished on request at same prices.

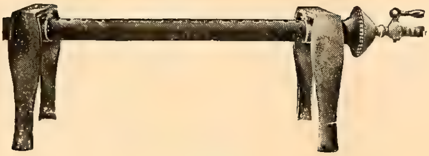
No.	A	B	C
Height, inside, cm	56	41	29
Width, inside, cm	44	26	31
Depth, inside, cm	29	26	18
Each	**29.00**	**17.50**	**14.50**

17435 **Sterilizers—Cabinet.** Same as No. 17430 above, but with solid back; best adapted for mounting on wall brackets.

No.	A	B	C
Height, inside, cm	56	41	29
Width, inside, cm	44	26	31
Depth, inside, cm	29	26	18
Each	**29.00**	**17.50**	**14.50**

Extras:

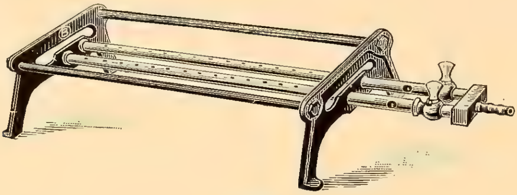
White Enameled Brackets, with screws for No. 17435-A	Per pair	**.90**
Same, for No. 17435-B and C	Per pair	**.60**
White Enameled Trays with slides, for Nos. 17430 and 17435	Each	**.60**
Towel Tray, for No. 174351A	Each	**2.40**



17440

17440 **Burner—Low Gas Stand.** Aluminum finish; especially adapted for combination sterilizer; size of base and height of apparatus for which it is desired should be stated when ordering ---------- Each 2.00

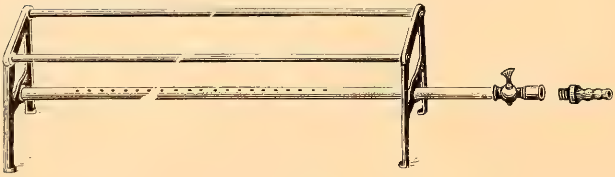
17442 **Burner—Low Gas Stand.** Same as No. 11570 above, but white enameled ---------- Each 2.65



17445

17445 **Sterilizer Stands.** Made of iron, with black finish; have burner and stopcock of brass; provided with double set of burners and stopcocks, as illustrated.

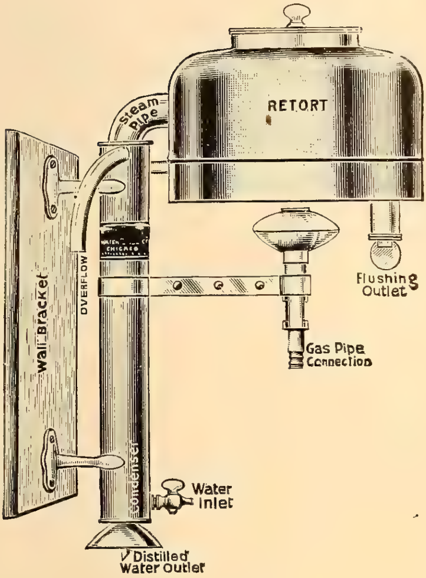
No.	A	B	C
Length, cm	20	31	38
Width, cm	15	15	15
Height, cm	10	10	10
Each	**4.50**	**5.00**	**5.25**



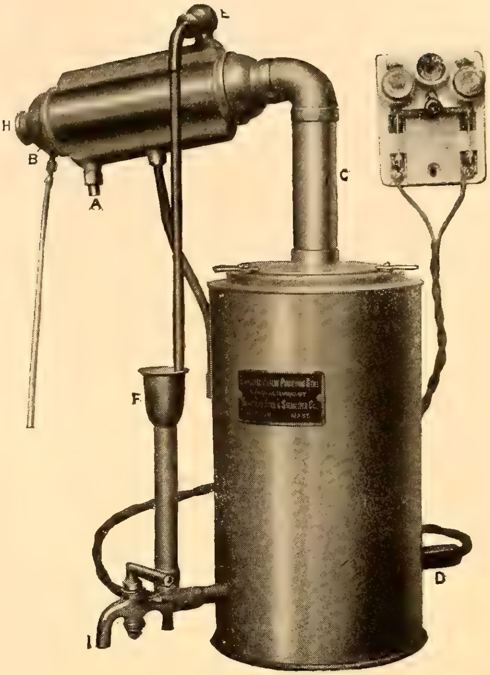
17450

17450 **Sterilizer Stands.** With single set of burners and stopcock, as illustrated.

No.	A	B	C	D	E	F
Length, cm	20	31	38	20	31	38
Width, cm	15	15	15	10	10	10
Height, cm	10	10	10	10	10	10
Each	2.25	2.40	2.70	2.25	2.40	2.70



17460



17470

17460 **Stills, Water, Acme.** Stills of this type are suitable for producing distillate in quantities not exceeding two gallons per hour. They are of the wall type, automatic in operation and water is preheated before entering distilling chamber. Construction is of copper and brass; the interior is tin-lined, the exterior is finished in nickel. Heating may be accomplished by coal or natural gas, acetylene, gasoline or steam. Unless otherwise specified burner for coal gas is furnished.

	Operated Gas		Operated Gasoline	Operated Steam
Capacity, gals., per hour	1	2	1	2
Shipping weight, lbs.	25	50	40	50
Each	**30.00**	**60.00**	**39.25**	**60.00**

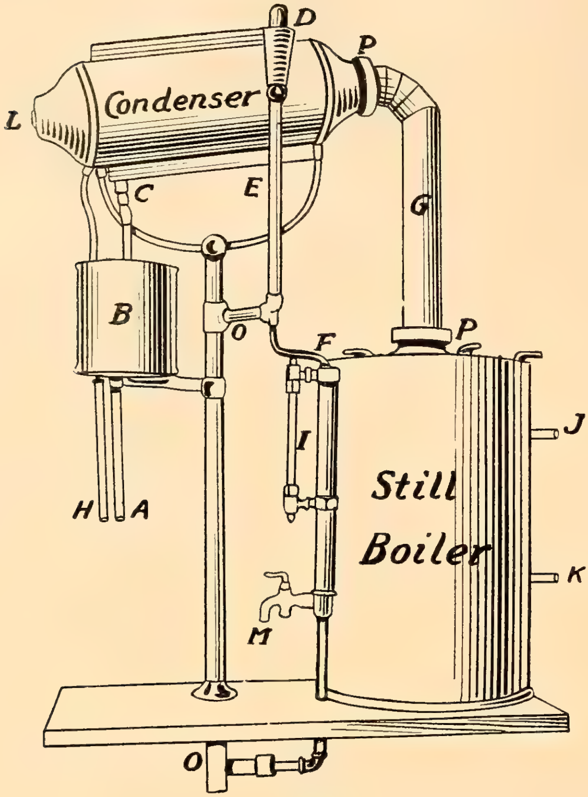
Stills, Water, Barnstead. Stills of this manufacture include four types, viz.: Laboratory, Commercial, Druggists and Home Types. Stills are constructed on the regenerative principle, water being preheated before entering the still and are continuous and automatic in operation. The construction is of cold rolled copper, tin-lined, condensers consisting of tinned copper and tinned brass tubes. These stills may be had in capacities from one quart to one hundred gallons per hour. Heating is accomplished by steam, gas, electrical unit or kerosene.

17465 **Laboratory Type—Gas Operated.**

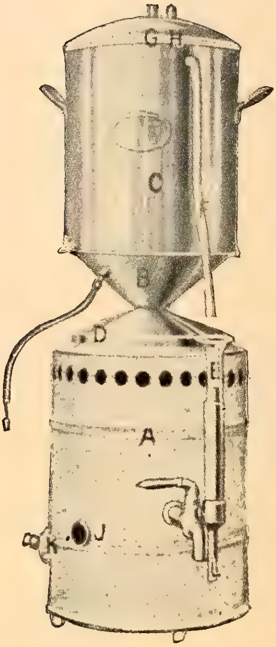
Capacity, gals., per hour	1	1½	2	5	10
Shipping weight, lbs.	70	75	85	100	410
Each	**60.50**	**75.00**	**96.00**	**165.00**	**297.00**

17470 **Laboratory Type—Electrically Operated.**

Capacity, gals., per hour	1	1½	2	5	10
Consumption in K. W. per hour	2.4	4	6	12	24
Shipping weight, lbs.	65	75	85	100	400
Each	**75.90**	**96.80**	**121.00**	**297.00**	**580.00**



17475



17485

17475 Commercial Steam Type.

Capacity, gals., per hour	1	2	5–7	10–15	15–20
Shipping weight, lbs.	70	75	85	150	300
Each	**72.60**	**104.50**	**154.00**	**220.00**	**330.00**
Capacity, gals., per hour	20–25	25–30	50	75	100
Shipping weight, lbs.	450	600	750	1260	1400
Each	**412.50**	**522.50**	**632.50**	**770.00**	**880.00**

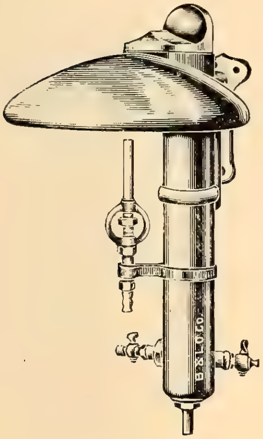
17480 Druggist's Type—Electrically Operated.

	(Burnished Copper)	(Nickel-plated)	(Nickel-plated)
Capacity, gals., per hour	½	½	1
Consumption, K. W., per hour	1.6	1.6	2.4
Shipping weight, lbs.	45	45	60
Each	**40.80**	**42.00**	**56.20**

17485 Druggist's Type—Gas Operated.

	(Burnished Copper)	(Nickel-plated)	(Nickel-plated)
Capacity, gals., per hour	½	½	1
Shipping weight, lbs.	45	45	60
Each	**30.00**	**31.80**	**43.00**

Send for "Water Stills," our special publication on Stills.



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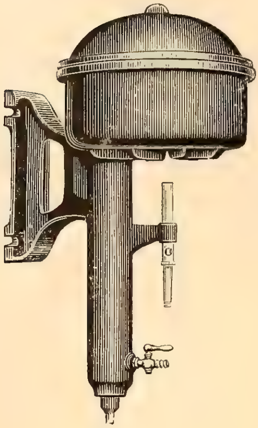

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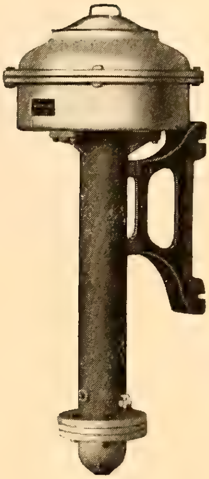


17530

17500 Stills, Water, Green's. This still is of a wall type and is most suitable where yield of one gallon per hour is sufficient. The still is constructed on the regenerative principle and is automatic in the delivery of distillate. The retort and body are of cast-iron, the condensing tube is of copper heavily tinned. Distillate does not touch surfaces of iron or of copper. The exterior is painted with aluminum paint. Capacity of one gallon per hour is the only size obtainable in this still. Heating is accomplished by gas burner. This is one of the cheapest and at the same time a most efficient still.

Capacity, per hour	1 gallon
Shipping weight	30 lbs.
Each	**35.00**

Stills, Water, Stokes'. These stills are of the wall type, are regenerative in principle and automatic in operation. The condenser cylinder and boiling chamber and other parts with which the raw water comes in contact are made of cast-iron; the condenser tubes and all portions with which the distillate comes in contact are of tin-lined brass. The exterior of the gas heated stills is finished with aluminum paint and the covers are porcelain lined. The larger sizes are painted blue gray and have tin-lined copper covers. These stills may be had in capacities from one-half to two and three-quarter gallons per hour when heated by gas; steam operated stills may be obtained in sizes from one to one hundred gallons per hour. Kerosene or gas heated stills are manufactured in a one-half gallon per hour size only.

17525 Gas Operated—(With adjustable burner for the use of any fuel gas.)

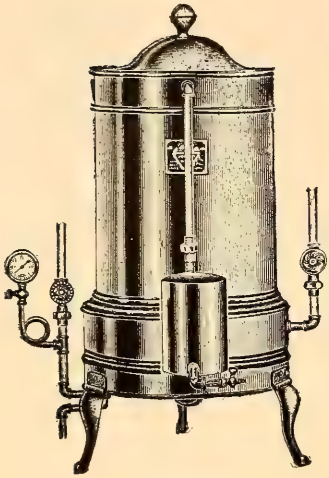
Capacity gals., per hour	½	¾	2¾
Shipping weight, lbs.	35	35	110
Each	**25.00**	**27.00**	**60.00**

17530 Steam Operated.

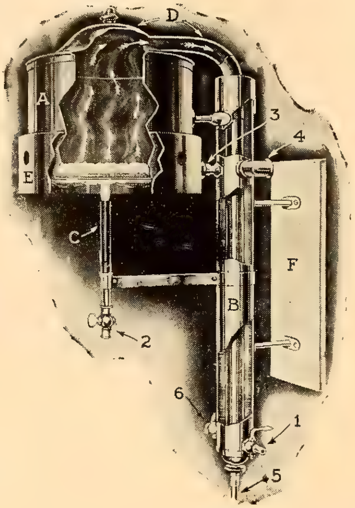
Capacity, gals., per hr.	¾	2¾	5	10	25	60	100
Shipping weight, lbs.	35	110	275	325	750	1200	1500
Each	**30.00**	**75.00**	**150.00**	**200.00**	**300.00**	**500.00**	**750.00**

17535 Gasolene Operated.

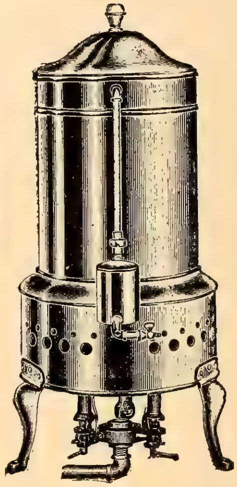
	Gasolene Operated	Kerosene Operated	Combination (For any source of heat)
Capacity, gals., per hour	½	½	¾
Shipping weight, lbs.	35	35	35
Each	**35.00**	**35.00**	**31.00**



17510



17520



17515

Stills, Water, Jewell-Polar. Stills of this manufacture may be had in sizes and types suitable for all purposes. Two distinct types are offered; one a self-contained urn type in which the condenser is superimposed, made in a large, steam operated size, a smaller laboratory still for producing smaller quantities and a third kind of the wall type which is provided with a tube condenser. They are constructed on the regenerative principle and are automatic and continuous in operation. Stills are made of heavy rolled copper, trimmings and fittings of brass, all interior surfaces are tin-lined and the exterior surfaces are nickel-plated or highly buffed copper and brass. The Laboratory Urn types vary in capacity from one to five gallons per hour, the wall type from one-half to two gallons and the steam still from two to three hundred gallons per hour. Heating is limited to gas and steam.

17505 **Standard**—Steam Operated.

Capacity gals., per hour	15	25	50	75
Shipping weight, lbs.	275	350	475	650
Each	**400.00**	**625.00**	**900.00**	**1200.00**
Capacity, gals., per hour	100	150	200	300
Shipping weight, lbs.	950	1300	1800	2600
Each	**1680.00**	**2250.00**	**2750.00**	**3500.00**

17510 **Laboratory**—Steam Operated.

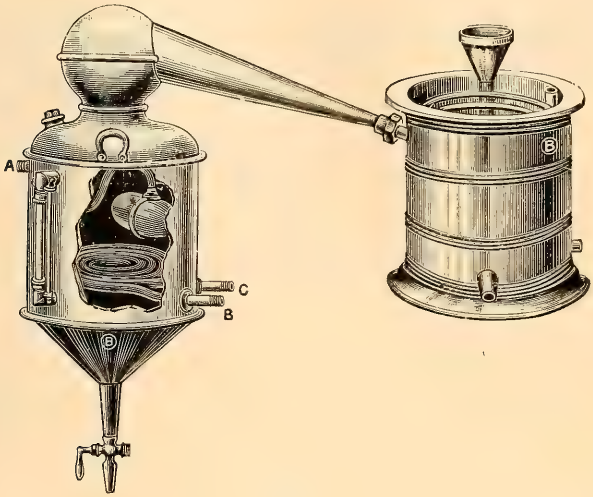
Capacity, gals., per hour	2	5	6	10
Shipping weight, lbs.	150	150	175	225
Each	**85.00**	**125.00**	**150.00**	**200.00**

17515 **Laboratory**—Gas Operated.

Capacity, gals., per hour	1	2	3	5
Shipping weight, lbs.	75	100	110	175
Each	**70.00**	**100.00**	**150.00**	**200.00**

17520 **Laboratory**—Gas Operated Wall Type.

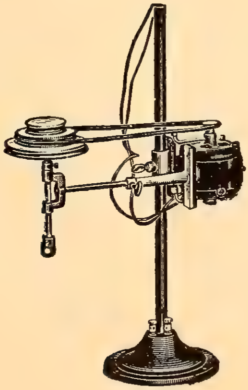
Capacity, gals., per hour	½	1	1½	2
Shipping weight, lbs.	40	50	65	90
Each	**30.00**	**50.00**	**75.00**	**95.00**



17525

17525 Stills—Laboratory. For distillation of water and oils or recovery of alcohol and solvents. Consists of heavy copper, tin lined still with movable head and water gauge connected with pure block tine condensing worm enclosed in a zinc vessel with proper inlets.

No.	A	B	C	D	E
Capacity, liters	2	4	8	12	20
Each	18.75	23.25	28.50	36.00	45.00



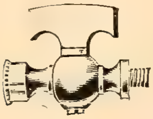
17540

17540 Stirring Apparatus. Has electric motor, adjustable bracket, spindle with chuck for holding stirrer blades and three-step pulley; furnished complete with rheostat for controlling speed; for alternating current.

No.	A	B
Voltage	110	220
Each	35.00	38.00

17545 Stirring Apparatus. Same as No. 17540 above, but for direct current.

No.	A	B
Voltage	110	220
Each	35.00	38.00



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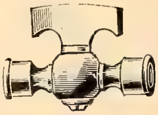

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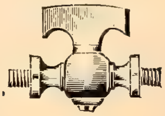

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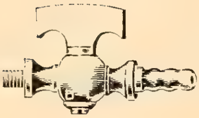

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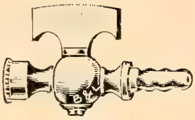

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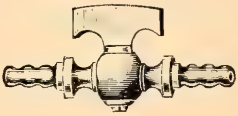


17575

17550 Stopcocks—Brass. One end with male screw, other with female screw.

No.	A	B
Bore, mm	3	6
Each	1.00	1.50

17555 Stopcocks—Brass. Both ends with female screw.

No.	A	B
Bore, mm	3	6
Each	1.00	1.50

17560 Stopcocks—Brass. Both ends with male screw.

No.	A	B
Bore, mm	3	6
Each	1.00	1.50

17565 Stopcocks—Brass. One end for tubing; other with male screw.

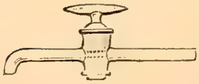
No.	A	B
Bore, mm	3	6
Each	1.00	1.50

17570 Stopcocks—Brass. One end for tubing; other with female screw.

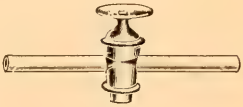
No.	A	B
Bore, mm	3	6
Each	1.00	1.50

17575 Stopcocks—Brass. Air and gas-tight; both ends for tubing.

No.	A	B
Bore, mm	3	6
Each	1.00	1.50



4930



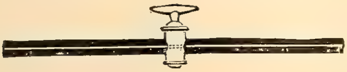
4935

4930 Stopcocks—Glass, Geissler's. With curved outlet.

No.	A	B	C	D	E	F	G	H
Diameter of bore, mm	1	2	3	4	5	6	8	10
Each	1.00	1.10	1.40	1.60	1.80	2.40	3.20	4.00

4935 Stopcocks—Glass, Geissler's. Straight.

No.	A	B	C	D	E	F	G	H
Diameter of bore, mm	1	2	3	4	5	6	8	10
Each	1.00	1.10	1.40	1.60	1.80	2.40	3.20	4.00



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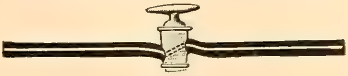


4950

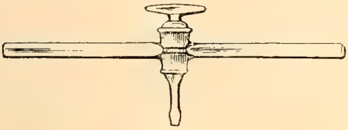
4940 **Stopcocks—Glass, Geissler's.** Straight; with inlet and outlet of capillary tubing, from 6 to 7 mm outside diameter.

No.	A	B
Diameter of bore, mm	1	2
Each	1.10	1.20

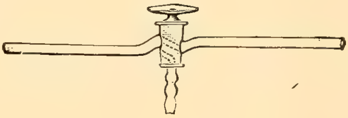
4945 **Stopcocks—Glass, Geissler's Latest Form.** Two-way; with plug bored at an angle; absolutely air-tight and will not leak.

No.	A	B
Diameter of bore, mm	2	4
Each	1.40	1.90

4950 **Stopcock—Glass. Geissler's Latest Form.** Same as No. 4945 above, but with capillary tubing; diameter of bore, 2 mm____________Each 1.70



4955



4965

4955 **Stopcocks—Glass, Geissler's.** Three-way; with downward outlet at end of stopper for rubber connection.

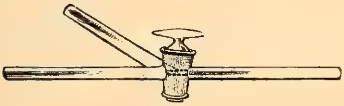
No.	A	B	C
Diameter of bore, mm	1	2	4
Each	1.40	1.60	1.80

4960 **Stopcocks—Glass, Geissler's.** Same as No. 4955 above, but with capillary tubing.

No.	A	B	C
Diameter of bore, mm	1	2	4
Each	1.75	2.00	2.25

4965 **Stopcocks—Glass.** Three-way; with oblique bore; with downward outlet at end of stopper for rubber connection.

No.	A	B
Diameter of bore, mm	2	4
Each	1.80	2.90



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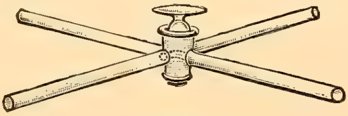


4980

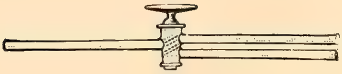
4970 **Stopcocks—Glass, Geissler's.** Three-way.

No.	A	B	C
Diameter of bore, mm	2	3	4
Each	1.40	1.60	1.80

4975 **Stopcock—Glass, Geissler's.** Same as No. 4970 above, but with inlet and outlet of capillary tubing; diameter of bore, 2 mm________Each 1.80

4980 **Stopcocks—Glass, Geissler's.** Four-way.

No.	A	B	C
Diameter of bore, mm	2	3	4
Each	2.00	2.40	2.80



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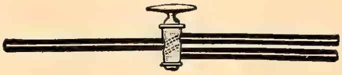


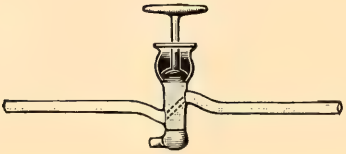
4990

4985 **Stopcocks—Glass.** Three-way; with stopper having two oblique bores, and with two outlets on one side.

No.	A	B
Diameter of bore, mm	2	4
Each	2.00	3.50

4990 **Stopcocks—Glass.** Same as No. 4985 above, but with capillary tubing.

No.	A	B
Diameter of bore, mm	2	4
Each	2.30	3.90



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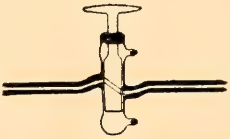


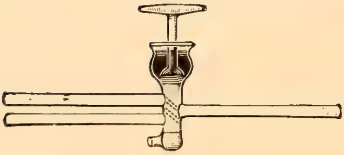
5000

4995 **Stopcocks—Glass, Geissler's Latest Form.** Two-way; with plug bored at an angle, and with mercury seal.

No.	A	B
Diameter of bore, mm	2	4
Each	3.20	4.40

5000 **Stopcocks—Glass, Geissler's Latest Form.** Similar to No. 4995 above, but with capillary tubing.

No.	A	B
Diameter of bore, mm	2	4
Each	3.50	4.75



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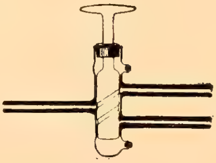


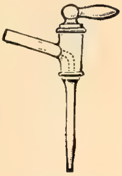
5010

5005 **Stopcocks—Glass.** Three-way; with stopper having two oblique bores, and with two outlets on one side; with mercury seal.

No.	A	B
Diameter of bore, mm	2	4
Each	4.00	5.60

5010 **Stopcocks—Glass.** Similar to No. 5005 above, but with capillary tubing.

No.	A	B
Diameter of bore, mm	2	4
Each	4.50	6.20



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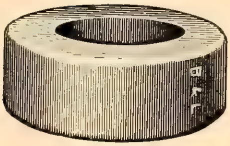


17595

5015 **Stopcocks—Glass.** Straight; of light weight for making burette tips, etc.; with drawn-out tip.

No.	A	B	C
Diameter of bore, mm	1	2	3
Each	1.10	1.20	1.40

5020 **Stopcocks—Glass, Fresenius'.** Angle form; for burette tips, etc.; with drawn-out tip.

No.	A	B
Diameter of bore, mm	1	2
Each	1.35	1.45

17590 **Suberite Plates or Blocks.** To be used as rests or covers for beakers; diameter, 120 mm.

No.	A	B	C
Thickness, mm	10	20	40
Each	.35	.50	.85

17595 **Suberite Rings.** For supporting flasks, dishes, etc.; are superior to straw rings commonly used for this purpose, being neater and more durable.

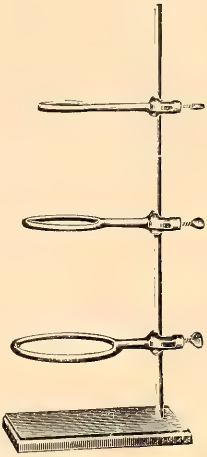
No.	A	B	C	D	E	F
Diameter, (inside) mm	30	60	90	120	150	180
Each	.25	.45	.65	.85	1.20	1.50

GLASSWARE CATALOG

We have published a complete catalog on Laboratory Glassware. It covers only glassware and related materials, but in this regard it is complete.

We shall be pleased to forward copy to you.

17600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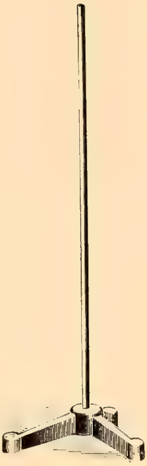
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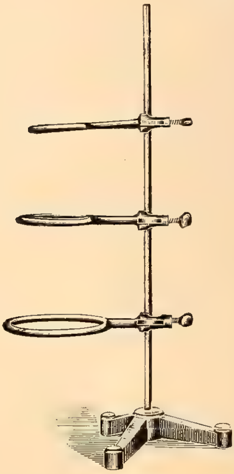

17615

17600 **Supports—Apparatus.** Rectangular base; with screw threads of ample size, well cut and fitted.

No.	A	B	C	D
Size	Small	Medium	Large	Extra Large
Size of base, mm	100 x 150	125 x 200	130 x 225	150 x 275
Length of rod, mm	450	500	650	900
Each	**.40**	**.70**	**1.10**	**1.70**

17605 **Supports—Apparatus.** Rectangular base, same as No. 17600, with rings.

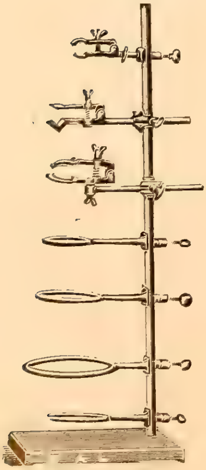
No.	A	B	C	D
Size	Small	Medium	Large	Extra Large
Number of rings	2	3	4	4
Each	**.90**	**1.50**	**2.30**	**2.90**

17610 **Supports—Apparatus.** Tripod base.

No.	A	B	C	D
Size	Small	Medium	Large	Extra Large
Length of rod, mm	450	500	650	900
Each	**.60**	**.80**	**1.40**	**2.25**

17615 **Supports—Apparatus.** Tripod base; same as No. 17610, with rings.

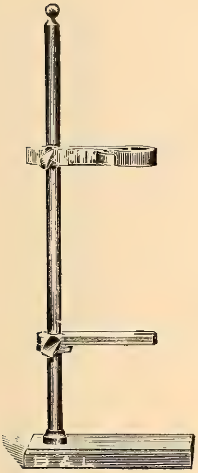
No.	A	B	C	D
Size	Small	Medium	Large	Extra Large
Number of rings	2	3	4	4
Each	**1.10**	**1.60**	**2.60**	**3.45**


17620

17620 **Support—Bunsen's Universal Apparatus.** Consists of Apparatus Support No. 17600, large size, with: 2 clamp holders, No. 11718; 1 clamp holder, No. ______; 3 rings, No. 16785; 1 burner fork, No. 11495; 1 Clamp, No. 11670; 1 clamp, No. 11706; 1 clamp, No. 11694—Each 4.50

BIOLOID REAGENTS

You can depend upon them. "Bioloid" is a guarantee of quality.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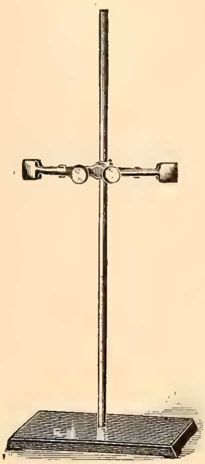
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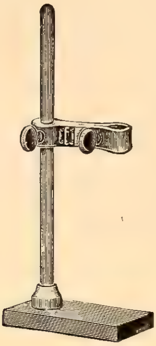
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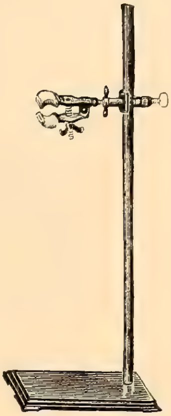
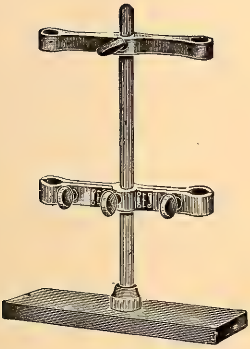

17645

17625	**Support—Burette.**	Rectangular iron base and rod, with clamp	Each	1.00
17630	**Support—Burette.**	Triangular iron base and rod, with clamp	Each	1.10
17635	**Support—Burette.**	Metal clamp, rubber lined, on iron stand; for two burettes	Each	2.00
17640	**Support—Burette.**	Of wood; clamp cork lined; for one burette	Each	1.75
17645	**Support—Burette.**	With extra arm to keep burette steady	Each	2.00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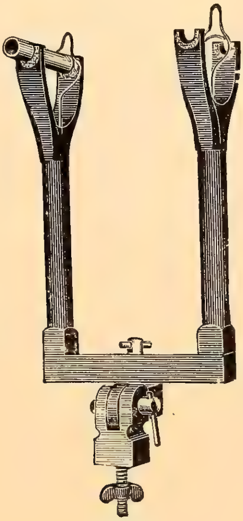
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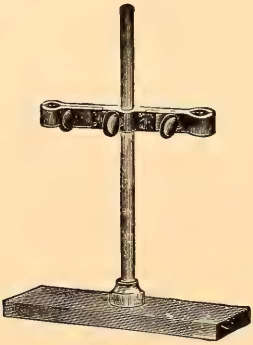
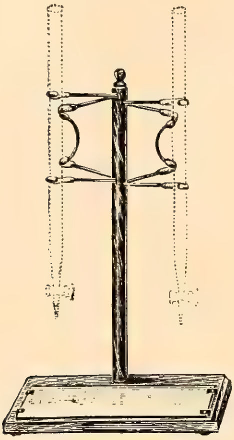

17655

17650	**Support—Burette.**	Of wood, clamp cork lined; for two burettes	Each	2.40
17655	**Support—Burette.**	With double arm to keep burettes steady	Each	2.70
17660	**Support—Burette.**	Very convenient, as it can be easily attached to reagent shelf, and when not in use can be turned up out of the way; for two burettes	Each	5.50



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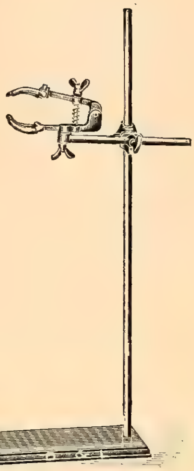
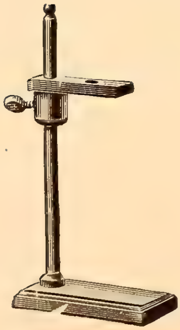


17685

17665	**Support—Burette, Chaddock's.** With square milk glass plate, set in wooden base; for one burette	Each	2.00
17670	**Support—Burette, Chaddock's.** With square milk glass plate, set in wooden base; for two burettes	Each	2.80
17675	**Support—Burette, Hofmann's.** Wooden base, with steel rod; for two burettes	Each	1.80
17685	**Support—Condenser.** An iron stand, with Bunsen's Universal clamp	Each	1.90



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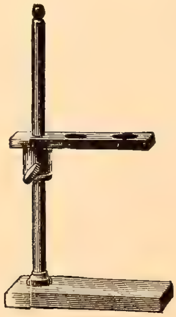

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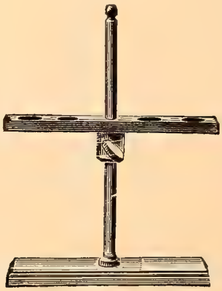
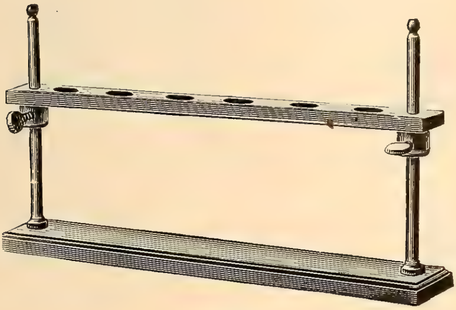


17696

17690	**Supports—Funnel.** For one funnel	Each	1.10
17693	**Supports—Funnel.** For two funnels	Each	1.20
17696	**Supports—Funnel.** For four funnels	Each	1.20



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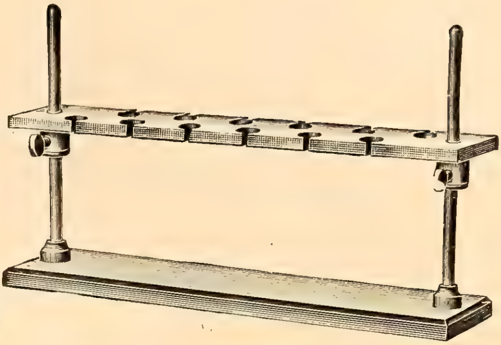
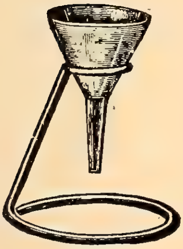


17705

17699	**Supports—Funnel.** For six funnels	Each	4.00
17702	**Support—Funnel.** For six funnels in one row; with slotted holes	Each	6.40
17705	**Support—Funnel.** For twelve funnels, six in each row; with slotted holes	Each	6.75



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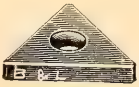

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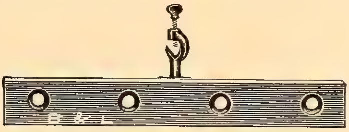

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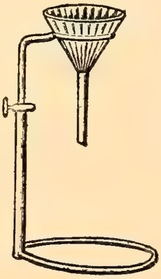
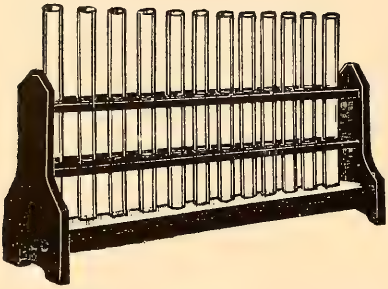


17711

17708	**Support—Funnel.** Made of one piece of heavy wire; diameter of funnel holder, 2¼ in.	Each	.60
17711	**Support—Funnel.** Made of heavy wire; adjustable in height from 6 to 10 in.; diameter of funnel holder, 2 in.	Each	.90
17714	**Support—Funnel.** For four funnels; consists of wooden arm with metal clamp for attachment to apparatus support No. 17600, medium	Each	.60

17717 **Supports—Funnel.** Of wood; triangular; for placing on beakers.

No.	A	B	C	D
Diameter, mm	50	100	150	200
Each	.20	.25	.35	.40



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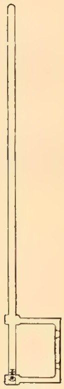
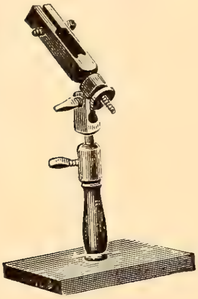


17725

17720	**Support—Nessler Tube.** With base covered by a milk-glass plate upon which the tubes rest	Each	2.50
17725	**Support.** Attachable to wall or table; fitted with rod	Each	.60



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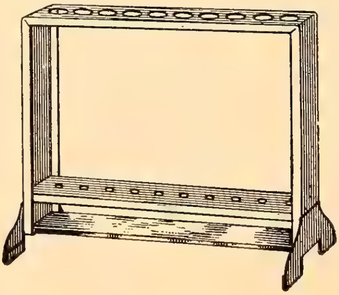

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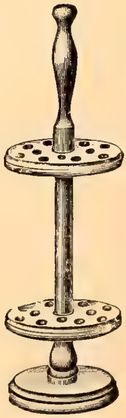

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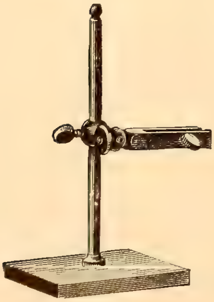

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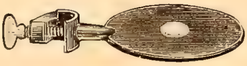
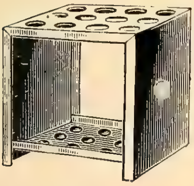


17740

17732	**Support—Pipette.** Of copper, nickel-plated, with removable glass bottom shelf	Each	3.60
17736	**Support—Pipette.** Revolving; arranged to hold a number of pipettes; prevents breakage and drains pipettes properly	Each	4.00
17738	**Support—Universal, Gay-Lussac's.** Of wood	Each	1.90
17739	**Support—Universal, Schellbach's.** Of wood	Each	2.30
17740	**Support—Table.** Of cast iron, japanned; 5 inches diameter, with clamp for use on Retort Stand; can also be used as a hot plate	Each	.65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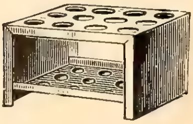
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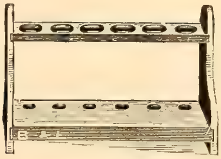
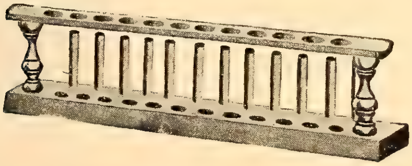

17775

17765	**Support—Test Tube.** Of copper, with ¾ inch holes for twelve tubes; lower shelf, on which tubes rest, is flanged up, forming a pan to receive contents of tubes in case any should break; size, 3 by 4 by 4½ inches high	Each	1.40
17770	**Support—Test Tube.** Similar to No. 17765, but 3 by 4 by 2½ inches high	Each	1.25
17775	**Support—Test Tube.** Of wood; for six tubes in one row	Each	.40
17778	**Support—Test Tube.** Of wood; for six tubes in one row; with pins	Each	.55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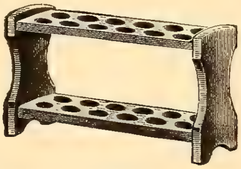
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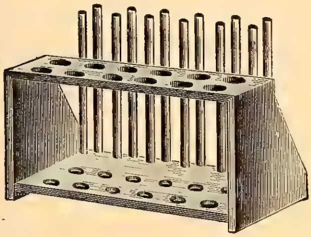
17781	**Support—Test Tube.** Of wood; for twelve tubes in one row	Each	.60
17784	**Support—Test Tube.** Of wood; for twelve tubes in one row; with pins	Each	.80
17787	**Support—Test Tube.** Of wood; for twelve tubes in two rows	Each	.95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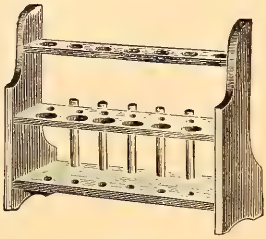
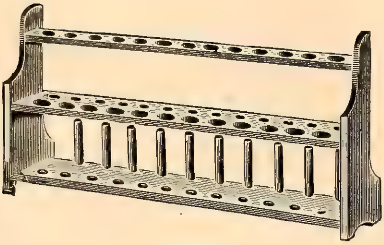

17798

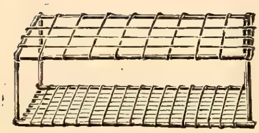
17790	**Support—Test Tube.** Of wood; for twelve tubes in two rows; with 1⅛ inch holes, with twelve pins	Each	1.45
17794	**Support—Test Tube.** Of wood; for twelve tubes in two rows, one above the other	Each	.65
17798	**Support—Test Tube.** Of wood; for twelve tubes in two rows, one above the other; with pins	Each	.80



17806

17802 **Support—Test Tube.** Of wood; for twenty-four tubes in two rows, one above the other ---------------------------------------Each 1.00

17806 **Support—Test Tube.** Of wood; for twenty-four tubes in two rows, one above the other; with pins------------------------------Each 1.25



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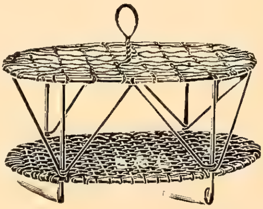

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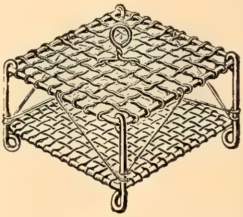
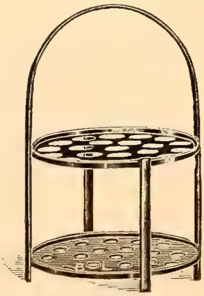


17818

17810 **Support—Test Tube.** Wire form; very light, clean and convenient; can also be used for drying----------------------------------Each .45

17814 **Support—Test Tube.** Circular; for forty tubes----------------Each .60

17818 **Support—Test Tube.** Square; for forty tubes----------------Each .60



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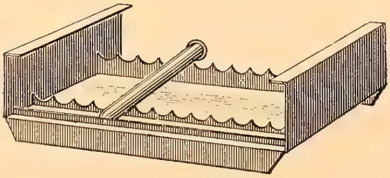


17826

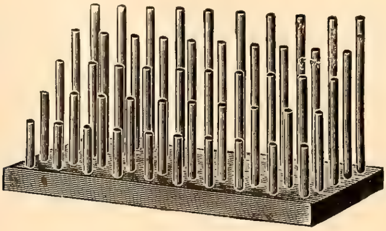
17822 **Support—Test Tube.** Of copper; for use in water baths, etc.

No.	A	B	C
Diameter, mm	120	160	200
Each	**1.50**	**1.80**	**2.20**

17826 **Supports—Test Tube, Slanting.** For Inspissators; of galvanized iron.

No.	A	B	C
Capacity, tubes, in one row	10	12	14
Each	**1.20**	**1.30**	**1.50**

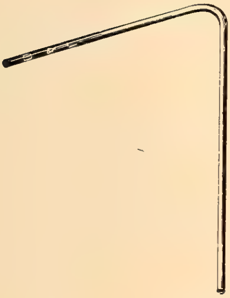
17830 **Support—Test Tube, Slanting.** Same as No. 17826 above, but for 20 tubes in two rows --Each 2.25



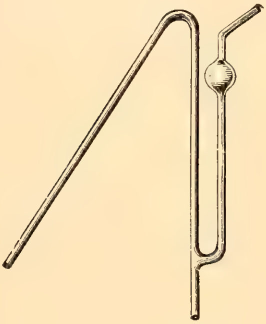
17831

17831 Supports—Test Tube. For drying test tubes.

No.	A	B
No. of pins	25	50
Each	2.00	2.25



5075



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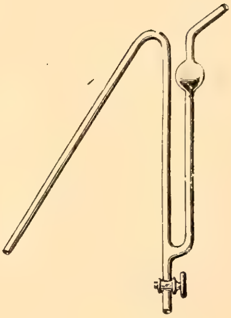


5085

5075 Syphons. Of glass; plain form.

No.	A	B	C	D	E	F
Length, mm	200	300	375	500	750	1000
Each	.30	.30	.36	.50	1.20	1.75

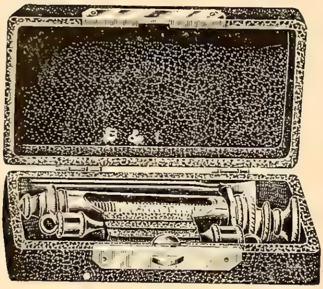
5080 Syphons. Of glass; with suction tube.

No.	A	B	C	D	E	F
Length, mm	200	300	375	500	750	1000
Each	.42	.48	.60	.80	1.55	2.20

5085 Syphons. Of glass; with suction tube and glass stopcock.

No.	A	B	C	D	E	F
Length, mm	200	300	375	500	750	1000
Each	1.50	1.80	2.10	2.80	3.60	4.20

Our Glassware Catalog will be sent immediately upon receipt of your request.



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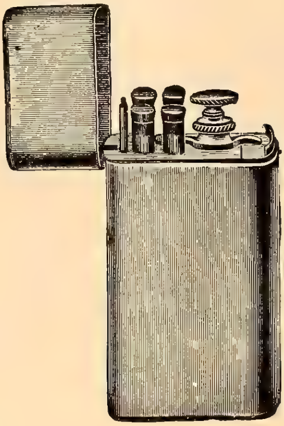
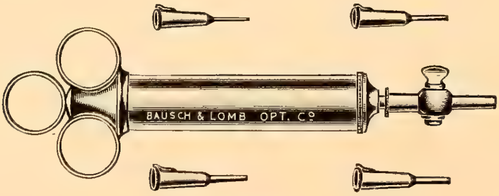


17855

17850	**Syringe—Hypodermic.** Glass barrel with metal shield; capacity, 2.5 cc; graduated plunger; finger rest attachment; two needles, cleaners and vial; complete, in case------Each	**1.50**
17851	Extra needles for No. 17850------Each	**.10**
17855	**Syringe—Hypodermic.** Made entirely of metal; can therefore be quickly and thoroughly sterilized; graduated plunger; in metal case, hinged lid; with two needles and four vials for holding tablets; capacity, 25 minims ------Each	**2.25**



17860

17860	**Syringe—Injecting.** Of metal, nickel plated, with detachable stopcock and four canulas with ligature catch; capacity, 20 cc; complete in case ------Each	**7.50**

If you are interested in other Clinical Appliances,
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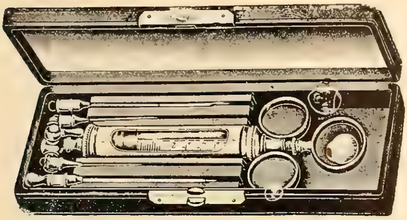

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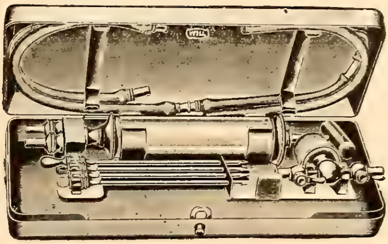
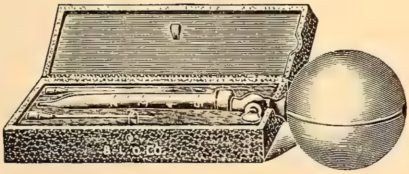


17870

17865	**Syringe—Injecting.** Glass barrel in metal frame; capacity, 2 drachms; plunger graduated to ¼ drachm; finger rest attachment; two-way stopcock; three needles of different sizes, and a trocar; complete, with cleaners, in leather case Each	4.25
17866	**Syringe—Injecting.** Same as above No. 17865, but of 4 drachms capacity Each	5.00
17870	**Syringe—Injecting.** Designed for injecting fluids and hardening and fixing reagents into vessels and tissues requiring larger quantities than ordinary hypodermic syringes contain; pump barrel nickeled inside and outside, is fitted with double-packed plunger; nozzle has automatic two-way cock; stopcocks in stopper attachment give complete control of fluid; corrosive fluids can be used without injuring pump; metal clamp holds stopper in place when pressure is applied; furnished complete, with 250 cc glass bottle, rubber tubing, three needles, a trocar, and four canulas, each 100 mm long and 1.0, 1.8, 2.1 and 2.4 mm diameter, respectively Each	16.00



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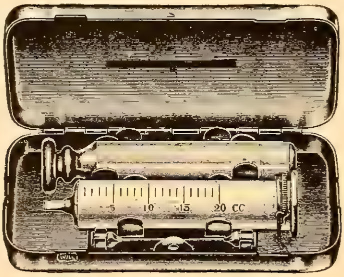


17880

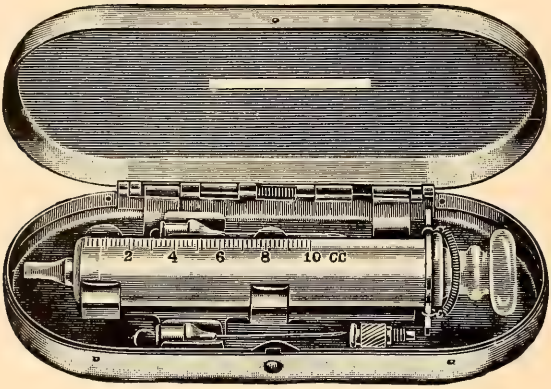
17875 **Syringes—Koch's.** Has glass barrel, brass stopcock and rubber bulb; furnished with two needles; in case.

No.	A	B	C
Capacity, cc	1	2	5
Each	**2.00**	**2.40**	**3.00**

17876 Extra needles for No. 17875 Each .20

17880 **Syringes—Luer.** In heavily nickel-plated and polished case; fitted with syringe graduated in single cc's; two needles and wires.

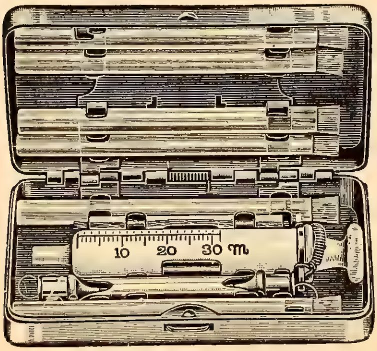
No.	A	B	C
Capacity, cc	20	25	30
Case	**6.50**	**7.25**	**8.00**



17885

17885 **Syringes—Luer.** In brass case, heavily nickel-plated and polished; fitted with syringe graduated in 1/5 cc, and 2 needles.

No.	A	B
Capacity, cc	5	10
Each	4.25	5.25



17890

17890 **Syringes—Luer.** In nickel silver metal case, highly plated and polished; fitted with syringe, double graduated in 1/10 cc and minims, 6 vials, 2 needles and wires.

No.	A	B
Capacity, cc	1½	2
Each	3.00	3.15

"Bioloid" Stains and Reagents.

17895 Hypodermic Needles for Luer Syringes. Size No. 28.

No.	A	B
Length, inches	⅜	½
Each	.20	.20
Per dozen	1.75	1.75

17900 Hypodermic Needles for Luer Syringes. Size No. 27.

No.	A	B	C	D	E	F
Length, inches	⅜	½	⅝	¾	⅞	1
Each	.20	.20	.20	.20	.20	.20
Per dozen	1.75	1.75	1.75	1.75	1.75	1.75

17903 Hypodermic Needles for Luer Syringes. Size No. 26.

No.	A	B	C	D	E	F	G	H	I
Length, inches	⅜	½	⅝	¾	⅞	1	1¼	1½	2
Each	.20	.20	.20	.20	.20	.20	.25	.25	.25
Per dozen	1.75	1.75	1.75	1.75	1.75	1.75	2.25	2.25	2.25

17906 Hypodermic Needles for Luer Syringes. Size No. 25.

No.	A	B	C	D	E	F	G	H
Length, inches	¼	½	⅝	¾	⅞	1	1½	2
Each	.25	.20	.20	.20	.20	.20	.25	.25
Per dozen	2.25	1.75	1.75	1.75	1.75	1.75	2.25	2.25

17909 Hypodermic Needles for Luer Syringes. Size No. 24.

No.	A	B	C	D	E	F	G	H
Length, inches	¼	½	⅝	¾	⅞	1	1½	2
Each	.25	.20	.20	.20	.20	.20	.25	.25
Per dozen	2.25	1.75	1.75	1.75	1.75	1.75	2.25	2.25

17912 Hypodermic Needles for Luer Syringes. Size No. 23.

No.	A	B	C	D	E	F	G	H
Length, inches	¼	½	⅝	¾	⅞	1	1½	2
Each	.25	.20	.20	.20	.20	.20	.25	.25
Per dozen	2.25	1.75	1.75	1.75	1.75	1.75	2.25	2.25

17915 Hypodermic Needles for Luer Syringes. Size No. 22.

No.	A	B	C	D	E	F	G
Length, inches	1	1¼	1½	1¾	2	2½	3
Each	.25	.25	.25	.25	.25	.30	.35
Per dozen	2.50	2.50	2.50	2.50	2.50	2.75	3.25

17918 Hypodermic Needles for Luer Syringes. Size No. 21.

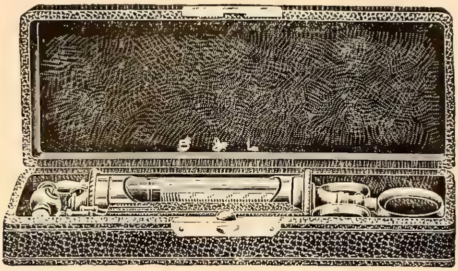
No.	A	B	C	D	E
Length, inches	1	1¼	1½	1¾	2
Each	.25	.25	.25	.25	.25
Per dozen	2.50	2.50	2.50	2.50	2.50

17921 Hypodermic Needles for Luer Syringes. Size No. 20.

No.	A	B	C	D	E	F	G	H
Length, inches	⅝	⅞	1	1¼	1½	1¾	2	2½
Each	.25	.25	.25	.25	.25	.25	.25	.30
Per dozen	2.25	2.25	2.50	2.50	2.50	2.50	2.50	2.75

17924 Hypodermic Needles for Luer Syringes. Size No. 19.

No.	A	B	C	D	E	F	G
Length, inches	1	1¼	1½	1¾	2	2½	3
Each	.30	.30	.30	.30	.30	.30	.35
Per dozen	2.75	2.75	2.75	2.75	3.00	3.00	3.25

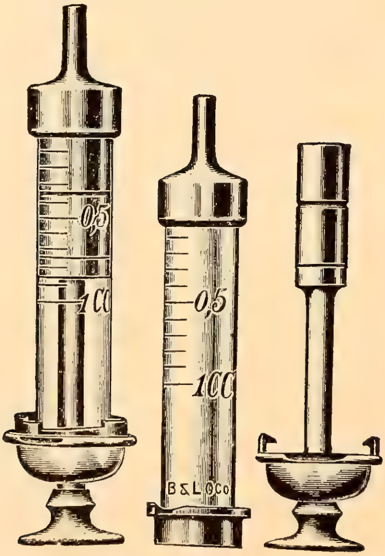


17930

17930 **Syringes—Pravaz'.** Has glass barrel, graduated plunger, and two needles; furnished in case.

No.	A	B	C
Capacity, cc	1	2	5
Each	1.00	1.50	2.00

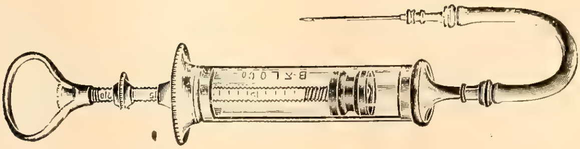
17931 Extra needles for No. 17930 ------------------------------------Each .20



17935

17935 **Syringes—Record.** Has nickeled plunger, ground to fit cylinder hermatically, which is held in place without screws or threads by simply giving metal cap a slight twist; needles are attached by conical slip joint; supplied with metal case that holds the plunger and cylinder separately; price includes two steel needles and the metal case.

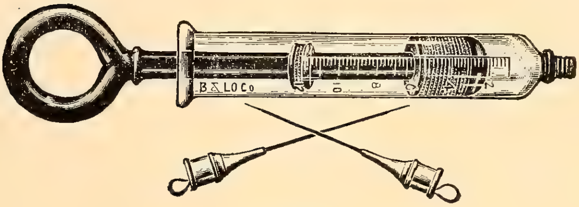
No.	A	B	C	D	E
Size, cc	1	2	5	10	20
Each	5.00	5.50	7.00	8.25	11.00



17940

17940 Syringes—Roux. Cylinder is of clear glass with heavy nickeled mountings; plunger attaches by large threaded cap; plunger head is heavy disc of special composition rubber; amount to be delivererd is determined by adjusting a nut to correct graduation on plunger; needle is attached by flexible rubber connection; price includes two steel needles, extra washers, plunger head and polished metal case.

No.	A	B	C
Size, cc	5	10	20
Each	9.00	12.00	15.00



17945

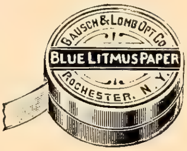
17945 Syringes—Sub-Q, Safety. Made of glass especially annealed; plunger is of black glass, which brings any colorless liquid into sharp relief, showing any fluid remaining in cylinder; plunger has glass prongs which prevent mineral packing from slipping or revolving; a ring of the packing on plunger acts as guide and prevents scratching; screw threads are provided for attaching needles; larger sizes are supplied with flexible coupling; supplied with two steel needles and paste-board case.

No.	A	B	C	D	E	F
Size, cc	1	2	4	6	12	20
Each	1.15	1.15	1.50	1.75	2.00	2.50

17948 Syringes—Sub-Q. Similar to No. 17945 above, but with plunger of clear glass, without glass prongs for the packing, cushion head, or guide ring of packing.

No.	A	B	C	D	E
Size, cc	1	2	4	6	12
Each	1.00	1.00	1.25	1.50	1.75

We carry a complete line of Physicians' Reagents for blood, urine and other clinical analyses.


BAUSCH & LOMB OPT. CO.
BLUE LITMUS PAPER
ROCHESTER, N. Y.

Test Papers. We list below the indicators and test papers ordinarily employed in the laboratory. Special test papers, indicators and reagents may be obtained from the laboratories of our Research Division. Please submit special requirements.

17955	**Test Papers.** Litmus; book form; blue; 50 strips	Per book	.05
		Per dozen	.50
17958	**Test Papers.** Litmus; book form; neutral; 50 strips	Per book	.05
		Per dozen	.50
17961	**Test Papers.** Litmus; book form; red; 50 strips	Per book	.05
		Per dozen	.50
17964	**Test Papers.** Congo; book form; 50 strips	Per book	.05
		Per dozen	.50
17967	**Test Papers.** Tumeric; book form; 50 strips	Per book	.05
		Per dozen	.50
17970	**Test Papers.** Litmus; blue; vial of 100 strips	Each	.08
		Per dozen	.70
17973	**Test Papers.** Litmus; neutral; vial of 100 strips	Each	.08
		Per dozen	.70
17976	**Test Papers.** Litmus; red; vial of 100 strips	Each	.08
		Per dozen	.70
17979	**Test Papers.** Congo; vial of 100 strips	Each	.08
		Per dozen	.70
17982	**Test Papers.** Tumeric; vial of 100 strips	Each	.08
		Per dozen	.70
17985	**Test Papers.** Lacmoid; vial of 100 strips	Each	.10
		Per dozen	1.00
17988	**Test Papers.** Lead acetate; vial of 100 strips	Each	.08
		Per dozen	.80
17991	**Test Papers.** Methyl Orange; vial of 100 strips	Each	.08
		Per dozen	.80
17994	**Test Papers.** Methyl Red; vial of 100 strips	Each	.16
		Per dozen	1.60
17997	**Test Papers.** Phenolphthalein; vial of 100 strips	Each	.10
		Per dozen	1.00
18000	**Test Papers.** Potassium Iodide Starch; vial of 100 strips	Each	1.00
		Per dozen	1.00
18003	**Test Papers.** Litmus; blue; tape form of detachable pieces; in rolls of 100 strips	Each	.15
		Per dozen	1.60
18006	**Test Papers.** Litmus; neutral; tape form of detachable pieces; in rolls of 100 strips	Each	.15
		Per dozen	1.60
18009	**Test Papers.** Litmus; red; tape form of detachable pieces; in rolls of 100 strips	Each	.15
		Per dozen	1.60
18012	**Test Papers.** Congo; tape form of detachable pieces; in rolls of 100 strips	Each	.15
		Per dozen	1.60
18015	**Test Papers.** Tumeric; tape form of detachable pieces; in rolls of 100 strips	Each	.18
		Per dozen	1.80
18018	**Test Papers.** Lead acetate; tape form of detachable pieces; in rolls of 100 strips	Each	.15
		Per dozen	1.60
18021	**Test Papers.** Phenolphthalein; tape form of detachable pieces; in rolls of 100 strips	Each	.20
		Per dozen	2.00

18024 **Test Paper.** Litmus; blue; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.10	.60

18027 **Test Paper.** Litmus; neutral; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.10	.60

18030 **Test Paper.** Litmus; red; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.10	.60

18033 **Test Paper.** Congo; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.10	.60

18036 **Test Paper.** Tumeric; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.30	.70

18039 **Test Paper.** Lacmoid; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.50	.80

18042 **Test Paper.** Lead Acetate; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.30	.70

18045 **Test Paper.** Methyl Orange; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.30	.70

18048 **Test Paper.** Methyl Red; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	2.50	1.40

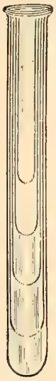
18051 **Test Paper.** Phenolphthalein; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.50	.80

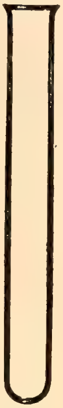
18054 **Test Paper.** Potassium Iodide; in sheets.

No.	A	B
Size, mm	250 x 400	250 x 200
Per quire	1.60	.90

18057 **Test Paper.** Azolitmin; in sheets 250 x 200 mm............Per quire 6.50



5105



5107

5105 **Test Tubes.** With lip; thin wall; even thickness; of best selected quality, free from bubbles and stripes; well annealed; wrapped separately in paper.

Size No.	1	2	3	4	5	6	7	8
Length, mm	50	65	65	70	75	75	75	80
Diameter, mm	6	6	11	11	6	9	11	16
Per Hundred	**1.15**	**1.15**	**1.35**	**1.35**	**1.15**	**1.35**	**1.35**	**1.50**
Size No.	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Length, mm	80	90	90	100	100	100	100	100
Diameter, mm	20	11	13	8	10	12	14	16
Per Hundred	**2.15**	**1.35**	**1.45**	**1.45**	**1.45**	**1.45**	**1.70**	**1.80**
Size No.	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Length, mm	100	100	115	120	120	120	120	120
Diameter, mm	18	25	13	10	13	16	18	28
Per Hundred	**2.15**	**3.20**	**1.65**	**1.50**	**1.70**	**1.90**	**2.15**	**5.90**
Size No.	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**
Length, mm	135	140	150	150	150	150	150	150
Diameter, mm	16	16	9	12	16	18	20	22
Per Hundred	**2.05**	**2.15**	**1.80**	**2.00**	**2.25**	**2.50**	**2.85**	**3.35**
Size No.	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Length, mm	150	150	180	180	180	180	200	200
Diameter, mm	25	30	18	20	22	25	16	20
Per Hundred	**3.50**	**7.80**	**3.20**	**3.20**	**3.50**	**3.90**	**3.35**	**3.90**
Size No.	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**
Length, mm	200	200	225	225	230	250	250	250
Diameter, mm	25	30	10	25	15	25	28	38
Per Hundred	**5.00**	**8.50**	**2.85**	**5.50**	**3.20**	**5.60**	**8.50**	**25.50**
Size No.	**49**	**50**	**51**	**52**				
Length, mm	290	300	300	300				
Diameterr, mm	18	30	35	50				
Per Hundred	**9.20**	**17.00**	**25.50**	**35.00**				

5107 **Test Tubes—Pyrex.** With lip.

No.	A	B	C	D	E	F	G
Length, mm	70	100	125	150	150	100	150
Outside diameter, mm	10	12	15	16	18	25	25
Each	**.10**	**.12**	**.15**	**.18**	**.20**	**.25**	**.28**
No.	**H**	**I**	**J**	**K**	**L**	**M**	**N**
Length mm	200	250	300	200	250	300	200
Outside diameter, mm	25	25	25	32	32	32	38
Each	**.40**	**.45**	**.50**	**.60**	**.64**	**.68**	**.70**
No.	**O**	**P**	**Q**	**R**	**S**	**T**	
Length, mm	250	300	200	400	250	500	
Outside diameter, mm	38	38	50	50	65	65	
Each	**.80**	**.90**	**1.00**	**1.40**	**1.60**	**2.00**	

5110

5112

5114

5110 Test Tubes. Without lip; heavy wall; round bottom; of same quality as No. 5105 above.

Size No.	1	2	3	4	5	6	7
Length, mm	50	60	60	70	75	80	90
Diameter, mm	8	10	12	10	11	11	11
Per Hundred	1.10	1.10	1.25	1.15	1.30	1.30	1.30
Size No.	8	9	10	11	13	13	14
Length, mm	100	100	100	100	115	115	120
Diameter, mm	8	10	12	15	6	14	8
Per Hundred	1.35	1.35	1.45	1.70	1.45	1.70	1.50
Size No.	15	16	17	18	19	20	21
Length, mm	120	120	120	120	120	130	140
Diameter, mm	12	16	18	20	22	10	10
Per Hundred	1.50	1.90	2.05	2.40	2.85	1.50	1.80
Size No.	22	23	24	25	26	27	28
Length, mm	150	150	150	150	150	150	150
Diameter, mm	10	12	14	16	18	20	22
Per Hundred	1.80	2.00	2.15	2.30	2.50	2.85	3.35
Size No.	29	30	31	32	33		
Length, mm	150	180	180	200	200		
Diameter, mm	25	18	22	18	25		
Per Hundred	3.50	3.20	3.50	3.50	5.00		

5112 Test Tubes—Pyrex. Without lip.

No.	A	B	C	D	E	F	G
Length, mm	75	100	125	150	150	100	150
Outside diameter, mm	10	12	15	16	18	25	25
Each	.09	.11	.14	.17	.19	.23	.26
No.	H	I	J	K	L	M	N
Length, mm	200	250	300	200	250	300	200
Outside diameter, mm	25	25	25	32	32	32	38
Each	.38	.43	.48	.56	.60	.64	.66
No.	O	P	Q	R	S	T	
Length, mm	250	300	200	400	250	500	
Outside diameter, mm	38	38	50	50	65	65	
Each	.76	.86	.95	1.35	1.50	1.90	

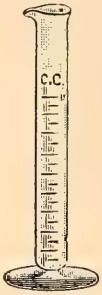
5114 Test Tubes. For bacteriological work; equipped with screw metal cap, with a cork insert, thus sealing tube tightly and preventing the culture from drying out, which is so common in the cotton-plugged culture type; will preserve media and cultures for a considerable length of time.

No.	A	B	C	D
Length, mm	125	125	150	150
Diameter, mm	15	18	16	18
Per dozen	.60	.70	.70	.95
Per gross	6.00	7.20	7.20	9.60

5115

5120

5125



5130

5115 **Test Tubes.** With side neck and lip; of same quality as No. 5105 above.

No.	A	B	C	D	E	F
Length, mm	100	120	150	180	200	250
Diameter, mm	12	15	18	21	25	25
Each	.09	.11	.12	.15	.16	.22

5120 **Test Tubes.** With foot and lip; of same quality as No. 5105.

No.	A	B	C	D	E	F
Length, mm	100	125	150	175	200	250
Diameter, mm	13	16	18	21	25	25
Each	.06	.10	.13	.17	.22	.32

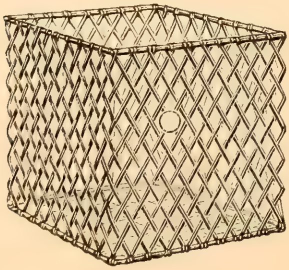
5125 **Test Tubes.** Graduated; with lip, but without foot.

No.	A	B	C	D	E
Capacity, cc	5	10	15	15	20
Graduated, cc	1/10	1/10	1/10	1/5	1/10
Each	.24	.30	.36	.34	.45

No.	F	G	H	I	J
Capacity, cc	20	25	25	30	30
Graduated, cc	1/5	1/10	1/2	1/5	1/2
Each	.42	.48	.45	.54	.50

5130 **Test Tubes.** Graduated; with foot and lip.

No.	A	B	C	D	E	F
Capacity, cc	5	10	15	20	25	30
Graduated, cc	1/10	1/10	1/10	1/10	1/10	1/5
Each	.42	.48	.54	.63	.66	.72



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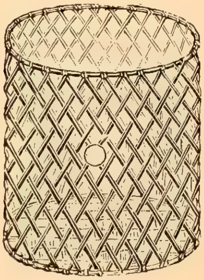
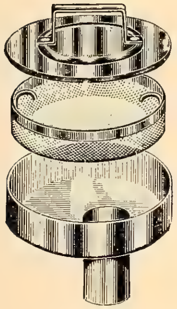


18080-D

18080 **Test Tube Baskets.** Made of smooth tin wire, with very few joints; for use in incubators and sterilizers.

No.	A	B	C	D
Height, cm	150	150	100	150
Length, cm	150	125	125	
Width, cm	150	100	100	
Diameter, cm (Circular)				125
Each	1.20	.50	.60	.60



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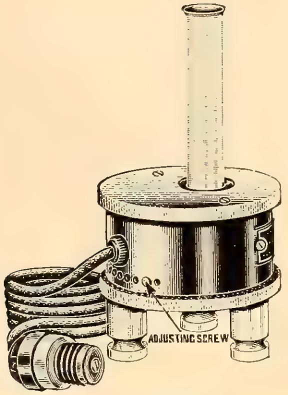

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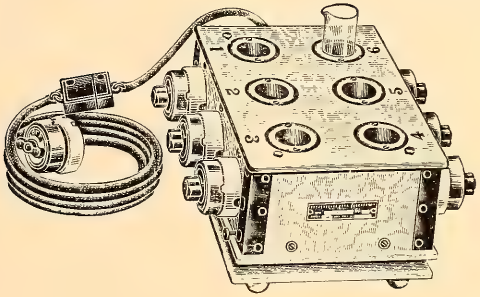


18090

18085 **Test Tube Boiler—Electric.** Consists of small, cylindrical drum, having nickel-plated, metal body with top and bottom of ¼-in. transite; dimensions of drum: height, 60 mm; diameter, 90 mm; mounted on three legs; near center of drum is metal cup, 1 1/16-in. in diameter and 1⅜-in. in depth, serving as heating receptacle; cup is encased in heating unit, controlled by automatic, adjustable electro-thermo regulator contained within drum; test tubes, to be heated, are placed in this cup, temperaturer being so controlled that contests of tube may be brought to boiling point without boiling over; adapter rings are provided for receptacle, permitting use of following sized test tubes, furnished with outfit: ½, ⅝, ¾ and 1 in.; small crucible, adapted for evaporating small quantities of liquids, is also furnished; maximum current consumption, 1¼ ampere ------------------Each 18.00

18090 **Test Tube Boiler—Combination Electric.** Similar in construction to No. 18085 above, but provided with six heating receptacles instead of one, each controlled by automatic, adjustable electro-thermo regulator and individual snap switch, enabling operator to disconnect receptacles not wanted; outside dimensions: 250 x 170 x 90 mm high; rests on four legs 18 mm high, providing an air space between bottom of test tube boiler and table; furnished complete, as shown in illustration, without test tubes or crucibles, but with set of adapter rings for each receptacle; snap switch also furnished for shutting off current supply to entire apparatus, without disturbing cord connection; maximum current consumption, 7½ amperes ----------------------------Each 75.00

18095 **Test Tube Sterilizer.** For use in connection with Test Tube Boiler No. 18085 above, constructed of metal, nickel-plated; dimensions: diameter, 80 mm; depth, 20 mm; wire basket is contained within sterilizer and may be removed by means of adjustable wire tong, furnished with outfit; apparatus will be found convient for sterilizing catheters, small hypodermics, needles, etc. --------------------Each 7.50

The thermometers listed below are but a few that have been selected as being pertinent to the nature of this catalogue. We carry, however, a very complete line of thermometers of standard and special scales, Beckmann's, Allihn's, etc., and can supply special shapes and ranges when desired.

5140 **Thermometers—Ordinary Quality.** With Centigrade Scale etched on stem and white background. Those over 200° C are nitrogen filled. Each thermometer is enclosed in pasteboard box.

No.	A	B	C	D	E	F
Graduated to	50	100	100	150	150	200° C
Length, mm	300	300	350	300	350	300
Each	**1.00**	**1.05**	**1.15**	**1.10**	**1.25**	**1.15**

No.	G	H	I	J	K	L
Graduated to	200	250	250	300	300	350° C
Length, mm	350	300	350	300	350	350
Each	**1.30**	**1.25**	**1.35**	**1.30**	**1.45**	**1.50**

5155 **Thermometers—Standard Quality.** With **Centigrade** scale etched on stem and white background. Those over 200° C are Nitrogen filled. With factory certificate of accuracy. Each Thermometer enclosed in a round wooden box.

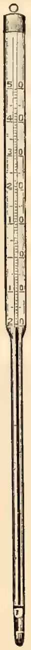
No.	A	B	C	D
Graduated to	—40 to —50	—40 to —50	—20to —50° C	—20 to —50
Subdivided in	1°	½°	1°	½°
Length, mm	225	300	225	300
Each	**1.80**	**1.90**	**1.80**	**1.90**

No.	E	F	G	H
Graduated to	0 to —50	0 to —50° C	—40 to 110	—40 to 110
Subdivided in	½°	½°	1°	1°
Length, mm	225	300	225	300
Each	**1.80**	**1.90**	**1.80**	**1.90**

No.	I	J	K	L
Graduated to	—40 to 110° C	0 to 150	0 to 150	0 to 200
Subdivided in	½°	1°	½°	2°
Length, mm	350	300	350	300
Each	**2.20**	**2.20**	**2.35**	**2.25**

No.	M	N	O	P
Graduated to	0 to 200° C	0 to 200	0 to 250	0 to 250
Subdivided in	1°	1°	2°	1°
Length, mm	350	450	300	350
Each	**2.50**	**3.15**	**2.35**	**2.60**

No.	Q	R	S	T	U
Graduated to	0 to 250° C	0 to 300	0 to 300	0 to 360	0 to 360° C
Subdivided in	1°	2°	1°	2°	2°
Length, mm	450	350	450	350	450
Each	**3.35**	**2.90**	**3.55**	**3.00**	**3.75**



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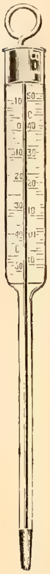

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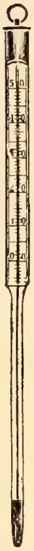
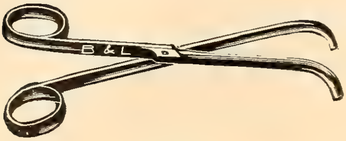


18115

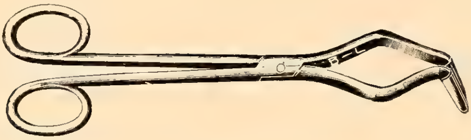
18100	**Thermometer—Incubator.** High grade; made of best quality, normal glass and provided with milk glass scale, on which the standard temperature, 37½°, is indicated by red line; length, 500 mm; scale, 0 to 60° C, graduated in 1/10° .... Each	5.00
18105	**Thermometer—Incubator.** Similar to No. 18100 above; length, 450 mm; scale, 0 to 50° C, graduated in 1/5° .... Each	4.50
18110	**Thermometer—Incubator.** Self-registering; maximum and minimum on Sixe's system; milk glass scales are 160 mm in length and graduated from minus 20° to plus 50° C; standard temperature is indicated by red line; lower part, for insertion in tubulation of incubator, is 200 mm long; furnished complete, with horse-shoe magnet for re-adjusting indicators .... Each	6.00
18115	**Thermometer—Incubator.** Has very distinct graduations on white background; graduated from 0 to 50° C, with standard temperature indicated by red line; total length, 250 mm .... Each	3.00
18120	**Thermometer—Incubator.** Short form; for hanging inside incubator chamber; is enclosed in metal case with perforated outer sheath which turns so as to entirely enclose it; graduated from 0 to 50° C .... Each	2.50

Note—Dairy Thermometers listed on page 324 under "Milk Testing Apparatus.



18145

18151



18170

18145 **Tongs—Crucible.** Brass, polished; single bent.

No.	A	B	C
Length, mm	225	250	300
Each	.65	.85	1.00

18148 **Tongs—Crucible.** Same style as No. 18145 above; nickel-plated.

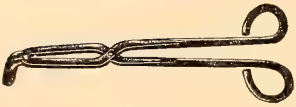
No.	A	B	C
Length, mm	225	250	300
Each	1.00	1.20	1.40

18151 **Tongs—Crucible.** Brass, polished; double bent.

No.	A	B	C
Length, mm	225	250	300
Each	.65	.85	1.00

18153 **Tongs—Crucible.** Same style as No. 18151 above; nickel-plated.

No.	A	B	C
Length, mm	225	250	300
Each	1.00	1.20	1.40



18155

18165

18155 **Tongs—Crucible.** Of forged steel, nickel-plated; single bent.

No.	A	B
Length, mm	225	300
Each	.60	.70

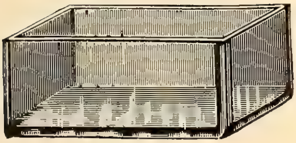
18160 **Tongs—Crucible.** Of forged steel, nickel-plated; double bent.

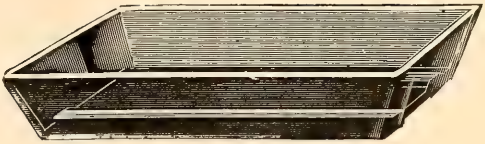
No.	A	B
Length, mm	225	300
Each	.60	.70

18165 **Tongs—Crucible.** Of nickel-chromium alloy; double bent; length, 225 mm -- Each 3.75

18170 **Tongs—Crucible, Platinum Tipped.** Of pure nickel, with platinum shoes; length, about 220 mm -------------------------- Price on application

18175 **Tongs—Crucible, Platinum Tipped.** Nickel-plated, with solid platinum tips -- Price on application


5335


5345

5335 **Trays—Glass.** With vertical sides and polished edges.

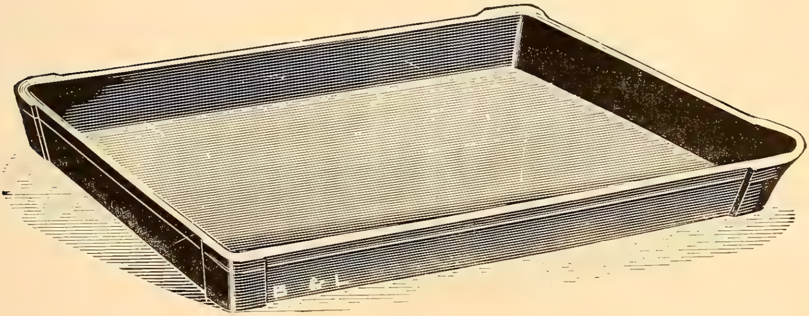
No.	A	B	C
Length, mm	100	115	120
Width, mm	40	50	60
Height mm	40	50	35
Each	.60	.75	.90

5345 **Trays—Photographic.** Of white pressed glass; for developing photographs and other purposes.

No.	A	B	C	D	E
Length, in.	5½	6	8½	9	10½
Width, in.	4	4	5½	7	8
Each	.27	.27	.38	.60	.80

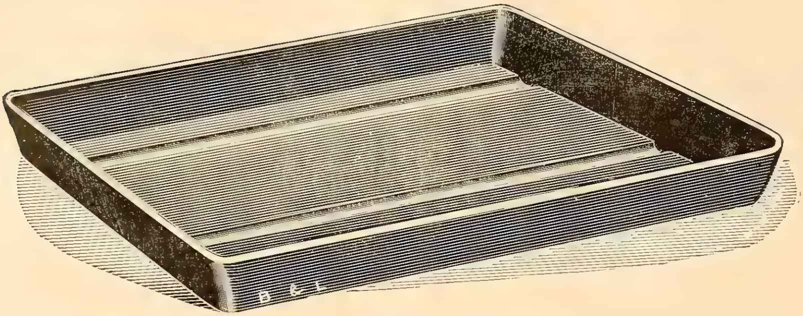
5350 **Trays.** Of amber glass; for developing photographs and other purposes.

No.	A	B	C	D	E
Length, in.	5½	6	8½	9	10½
Width, in.	4	4	5½	7	8
Each	.27	.27	.38	.60	.80


18180

18180 **Trays—Standard Hard Rubber.** With pour-out; dull finish; guaranteed to stand action of hot water up to temperature of 180° F.

No.	A	B	C	D	E
Length, mm	135	185	215	230	265
Width, mm	110	135	140	180	215
Each	.90	1.10	1.40	1.75	2.50

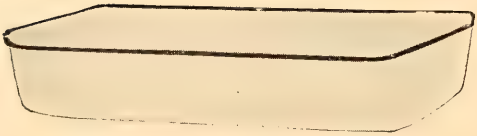


18185

18185 Trays—Genuine Hard Rubber. Superior to so-called composition trays; with two grooves in bottom.

No.	A	B	C	D
Length, mm	145	215	230	265
Width, mm	110	140	180	215
Each	**1.00**	**1.40**	**1.75**	**2.50**

18190



18195

18210

18190 **Trays.** Of white enameled steel; seamless; lipped.

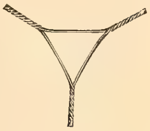
No.	A	B	C	D
Length, mm	140	180	200	240
Width, mm	115	140	150	190
Depth, mm	28	28	32	35
Each	**.50**	**.65**	**.85**	**1.20**

18195 **Trays.** Of white enameled steel; seamless.

No.	A	B
Length, mm	215	415
Width, mm	90	90
Depth, mm	38	65
Each	**.90**	**1.80**

18210 **Trays—Agateware.** Agate nickel steel; seamless.

No.	A	B
Length, mm	230	260
Width, mm	155	200
Each	**.60**	**.70**



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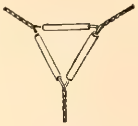

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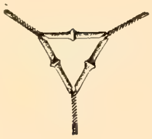

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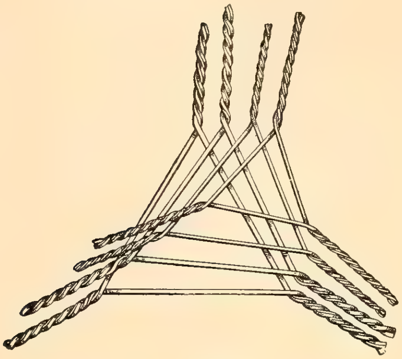


18245

18215 **Triangles.** Twisted iron wire.

	No. A	B	C
Size	Small	Medium	Large
Each	.05	.05	.05
Per dozen	.50	.50	.50

18220 **Triangles.** Iron wire, covered with pipe-stem.

	No. A	B	C
Size	Small	Medium	Large
Each	.10	.10	.12
Per dozen	1.00	1.00	1.20

18225 **Triangles.** Iron wire, covered with pipe-stem; flanged so that the vessel rests on three points only, thus increasing the heating surface, saving time and gas.

	No. A	B	C
Size	Small	Medium	Large
Each	.12	.13	.15
Per dozen	1.20	1.30	1.50

18230 **Triangles.** Of solid nickel.

No.	A	B	C	D	E
Length of sides, mm	40	50	60	70	100
Each	.20	.25	.30	.35	.45

18235 **Triangles—Nichrome.** Made from original alloy of nickel and chromium; are very hard, tough, and resist oxidation and attack of fumes; may be used wherever platinum triangles are suitable.

No.	A	B	C	D
Length of side, mm	40	50	65	75
Diameter inscribed circle, mm	22	29	36.5	44.5
Each	.12	.12	.15	.15

18240 **Triangles—Chromel.** Of square wire, with twisted ends.

No.	A	B	C	D
Length of sides, in.	1 1/2	2	2 1/2	3
Diameter of inscribed circle, in.	7/8	1 5/32	1 7/16	1 3/4
Each	.28	.28	.40	.40

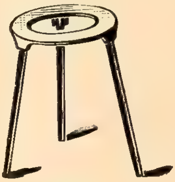
18245 **Triangles—Chromel.** Of wound wire, with twisted ends.

No.	A	B	C	D
Length of sides, in.	1 1/2	2	2 1/2	3
Diameter of inscribed circle, in.	7/8	1 5/32	1 7/16	1 3/4
Each	.18	.18	.25	.25

Triangles—Platinum. **See page 372.**

18250

18255



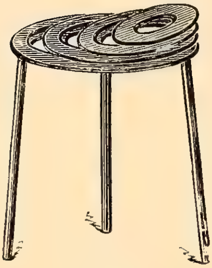
18260

18250 **Tripod—Iron.** Small size for alcohol lamp; height, 150 mm; inside diameter of ring, 65 mm ---------- Each .35

18255 **Tripod—Iron.** Has adjustable lamp bracket; outside diameter, 4 in.; height, 8 in. ---------- Each .70

18260 **Tripods—Iron.** For Bunsen burner; single ring.

No.	A	B	C	D	E	F	G
Diameter, mm	70	100	125	150	200	250	300
Each	.40	.40	.45	.60	.80	1.00	1.30



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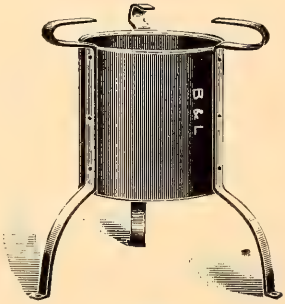


18270

18265 **Tripods—Iron.** For supporting water baths, sand baths, retorts, etc.

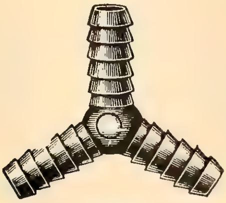
No.	A	B	C	D	E
Diameter, mm	125	150	200	250	300
Number of rings	2	3	4	5	6
Each	.65	.80	1.10	1.45	2.10

18270 **Tripods—Iron.** With metal chimney for protection of flame.

No.	A	B	C
Size	Small	Medium	Large
Each	1.10	1.35	1.80

Send for our "Glassware" Catalog.

18320



18325

5365

18320 **Tube—Reducer.** Of brass; used to reduce the size of rubber connecting tubing from 7/16 to 9/32 inch; no thread on ends..........Each .25
Per dozen 2.40

18325 **Tube—Connecting.** "Y" shape; of white metal; for ⅜ inch rubber tubing .... Each .20
Per dozen 2.00

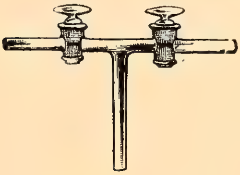
5365 **Tubes—Connecting.** Straight; with both ends of same size.

No.	A	B	C
Length, mm	65	70	75
Diameter, inside, mm	6	10	12
Each	.05	.05	.05

5370 **Tubes—Connecting.** Same as No. 5365, but with ends of different sizes.

No.	A	B	C
Length, mm	65	70	75
Diameter, inside, mm	6	10	12
Each	.05	.05	.05

5385



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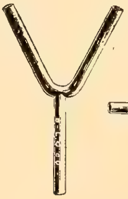


5390

5375

5375 **Tubes—Connecting.** Of glass; T-shape.

No.	A	B	C	D	E	F	G	H
Diameter, inside, mm	3	5	6	8	10	12	18	25
Each	.08	.09	.10	.11	.12	.17	.45	.60

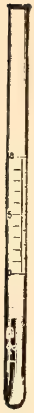
5380 **Tube—Connecting.** Of glass; T-shape; with two Geissler stopcocks; diameter, inside, 5 mm..Each 3.00

5385 **Tubes—Connecting.** Of glass; U-shape.

No.	A	B	C	D	E	F	G	H
Diameter, inside, mm	3	5	6	8	10	12	18	25
Each	.08	.09	.10	.11	.12	.17	.45	.60

5390 **Tubes—Connecting.** Of glass; Y-shape.

No.	A	B	C	D	E	F	G	H
Diameter, inside, mm	3	5	6	8	10	12	18	25
Each	.08	.09	.10	.11	.12	.17	.45	.60



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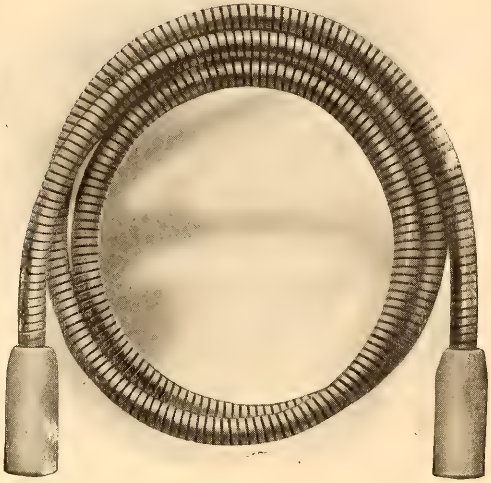

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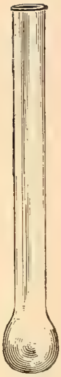


5415

5395 **Tube—Ether.** Graduated; for testing ether — Each .30

5410 **Tubes—Ignition.** Test tube form; of hard glass; round bottom; with lip.

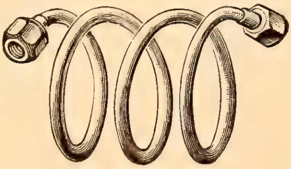
No.	A	B	C	CC	D	E	F
Length, mm	100	125	150	160	180	200	250
Diameter, mm	15	15	18	20	20	25	25
Each	.10	.12	.14	.15	.18	.25	.35

5415 **Tubes—Ignition.** Of very hard glass; with lip and bulb.

No.	A	B	C	D	E
Length, mm	100	125	150	180	200
Diameter, mm	12	15	18	20	25
Each	.10	.14	.15	.20	.28

18360 **Tubing, Metal—Flexible.** Made of continuous strip of grooved metal wound spirally over itself between layers; is especially practical from standpoint of safety and durability; of steel.

No.	A	B	C	D	E	F	G	H
Diameter, mm	6	6	6	6	8	8	8	8
Length, mm	450	600	750	900	450	600	750	900
Per length	.24	.28	.32	.36	.25	.30	.35	.40



18365

18365 **Tubing—Soft Brass.** With ⅛ inch I. P. size coupling on each end, to connect burner to metal gas supply tube on incubators.

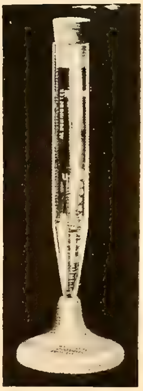
No.	A	B	C
Length, mm	750	1200	1500
Each	2.00	2.50	3.00

18385

18390

18395

18400


18405

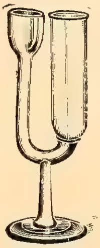
Urine Testing Apparatus

Urine Testing Apparatus. Special apparatus as well as reagents and test solutions are not listed, but may be obtained upon application. We can also supply any apparatus listed in standard texts and our Research Division laboratories are at your service for the development of special equipment and reagents.

18385	**Albuminometer—Esbach's.** For the quantitative determination of albumin in urine; graduated to read grams of albumin per liter of urine; without foot; with rubber stopper	Each	.35
18390	**Albuminometer—Esbach's.** Same as No. 18385, but on foot; with rubber stopper	Each	.50
18395	**Albuminometer—Esbach's.** Same as above No. 18385; furnished complete, with directions, in case	Each	.50
18400	**Albuminometer—Esbach's.** On glass foot, with pointed bottom; for testing small quantities	Each	1.20
18405	**Albuminometer—Esbach's.** Same as above No. 18400, but provided with universal sanitary base	Each	1.00

18410

18415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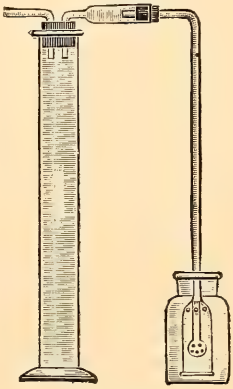
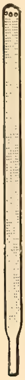

18425

18410	**Albuminometer—Esbach-Schelenz'**	Each	1.25
18415	**Albuminometer.** For the rapid quantitative determination of albumen in urine by use of the tube and centrifuge	Each	1.75
18420	**Albumoscope.** For the detection of albumen in urine with nitric acid; with this instrument the acid, when it comes in contact with the urine, is full strength, thus rendering the test much more delicate than as ordinarily applied; furnished complete with directions for use	Each	1.50
18425	**Ammonia Apparatus—Folin's.** Consists of special ammonia absorption tube, cylinder, drying tube and bottle with rubber stopper	Each	3.50



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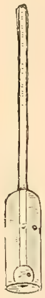

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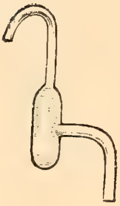

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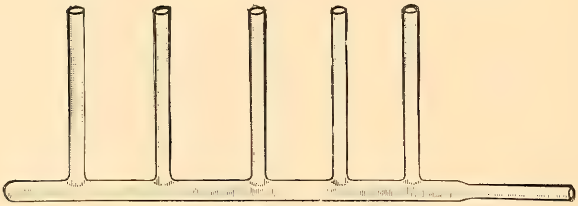

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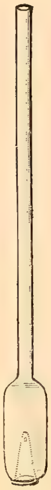

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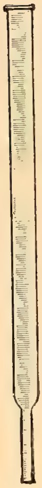


18455

18430 **Ammonia Absorption Tube—Folin's.** For use with Folin's apparatus ---------- Each .30

18435 **Ammonia Tube—Folin's.** For the absorption of ammonia in urine analysis ---------- Each 1.40

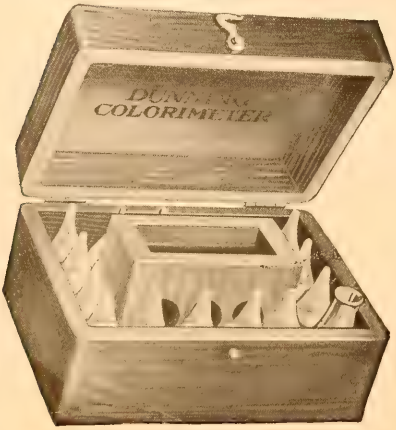
18440 **Ammonia Trap.** Glass; used in connection with Folin's new method of total nitrogen urea and ammonia in urine ---------- Each .70

18445 **Ammonia—Fume Absorption Tubes.** Furnished straight, for bending at desired angle in the laboratory ---------- Each .70

18450 **Connecting Tubes.** For use with absorption tubes.

No.	A	B	C
Number of tubes	4	5	6
Each	1.20	1.40	1.60

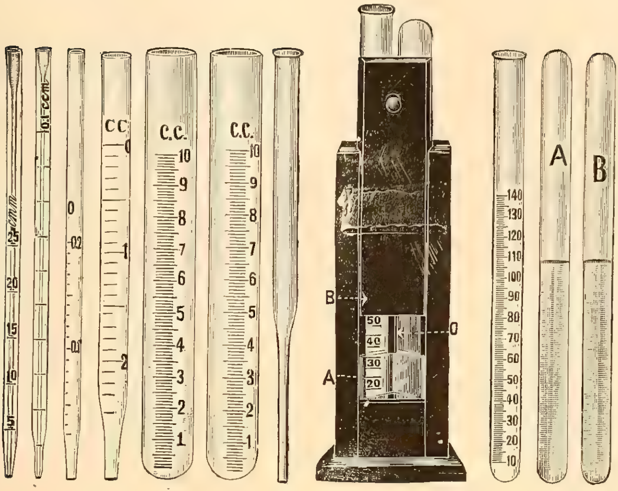
18455 **Condenser Tube.** For urea; length, 250 mm; diameter, 15 mm ---- Each .20



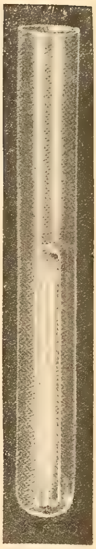
18460

18460 **Colorimeter—Dunning.** For estimating the quantity of phenolsulphone-phtalein excreted when applying the Rowntree-Geragty renal functional test ---------- Each 5.00

18465 **Colorimeter—Dunning.** Same as No. 18460 above, but with 10 phenolsulphone-phthalein ampoules ---------- Each 6.00



18470



17475

18470 **Colorimeter—Universal, Dr. Kuttner's Micro.** For directly estimating haemoglobin and sugar in the blood; uric acid, creatine and creatinine in blood and urine; and for determining the renal function according to the method of Rowntree and Geraghty; consists of closed upright box, with openings for graduated and standard color tubes; tubes are viewed through a window in front provided with a Helmholtz double plate, which shows the colors in a continuous band; sliding door forms front of the box and affords protection to the prism; size of outfit permits it to be carried in the pocket; furnished complete with housing of hard rubber and pocket carrying case——Each **18.00**

Standard Color Solution Tubes, Extra:

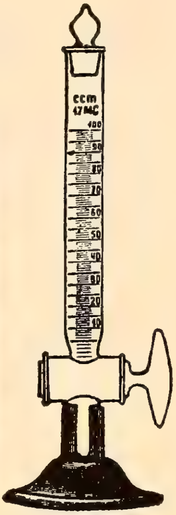
Phenolsulphonephthalein Test		
Standard Tube I	Each	**1.25**
Standard Tube II	Each	**1.25**
Standard Tube III	Each	**1.25**
Uric Acid Test in Urine and Stone		
Standard Tube Test (2)	Each	**1.50**
Creatine and Creatinine Test in Urine		
Standard Tube (1)	Each	**1.25**
Standard Tube (2)	Each	**1.25**

For Separate Parts see page 51.

18475 **Fermentation Tube—Johnson's.** Used extensively in urine tests, consists of small tube which is inverted in ordinary test tube.

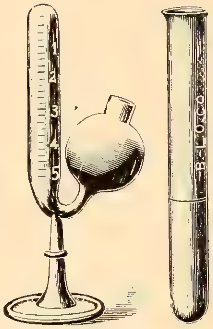
No.	A	B
Size, mm	40 x 5	65 x 5
Per dozen	**.35**	**.40**
Per gross	**3.00**	**3.60**

18480



18485

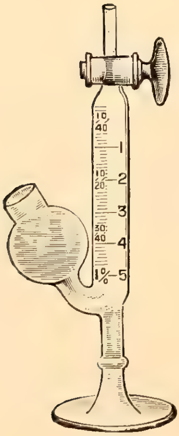
18490



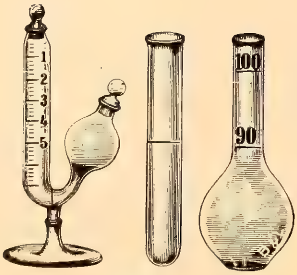
18495

18500

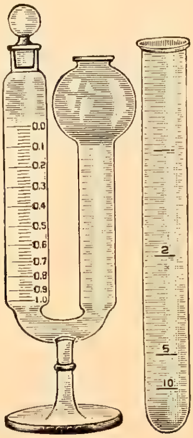
18480	**Indicanometer.** For the estimation of indican in urine; has a Universal sanitary base and is an accurate and efficient instrument	Each	1.00
18485	**Purinometer—Hall's.** For the quantitative determination of purin in urine; consists of graduated cylinder divided into two equal parts, and separated by perforated cork; furnished complete, with directions	Each	15.00
18490	**Reaction Glass—Ranke's.** For Ehrlich's diazo reaction	Each	.85
18495	**Saccharometer—Einhorn's Fermentation.** For the estimation of sugar in urine; consists of a graduated fermentation tube and a graduated test tube, on which can be read the percentage of sugar present; complete with directions	Each	.60
18500	**Saccharometer—Fermentation, Einhorn's.** Standard quality; fitted with Universal sanitary base	Each	2.50



18505

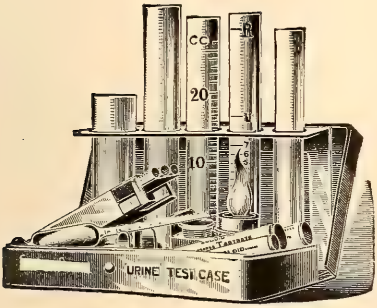


18510



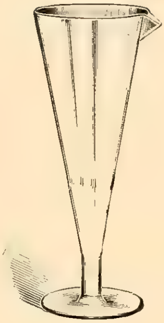
18515

18505	**Saccharometer—Einhorn's Improved.** Fitted with glass stopcock for easy filling and with graduated test tube	Each	3.00
18510	**Saccharometer—Einhorn-Fiebig's.** Consists of a very accurately graduated fermentation tube on glass foot and closed by ground stoppers; with mixing flask and graduate test tube	Each	3.00
18515	**Saccharometer—Lohnstein's.** For the accurate determination of sugar in diluted urine	Each	3.25

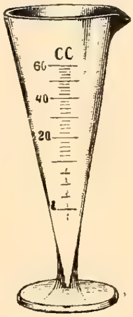


18520

18525



5090



5095

18520 **Test Case—Urine.** Made of nickel-plated metal; has urinometer in nickel-plated case, Esbach's albuminometer, graduated measure, pipette, test-tubes and stand, spirit-lamp, test papers, analysis charts, Indigo test, Picric acid, potassium ferrocyanide, and citric acid; furnished complete in nickeled case with doe-skin cover________Each 14.30

18525 **Test Glasses.** Sedimentation glass and urinometer cylinder combined.

No.	A	B
Size, mm	150 x 40	200 x 50
Each	.60	.75

5090 **Test Glasses—Sedimentation.** For collecting sediments; of best resistance glass; conical form; with foot and pour-out.

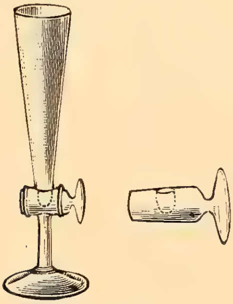
No.	A	B	C	D	E	F
Capacity, cc	30	60	125	200	250	500
Each	.50	.60	70	.85	1.05	2.25

5095 **Test Glasses—Sedimentation.** Same as No. 5090 above, but graduated in metric system.

No.	A	B	C	D	E	F
Capacity, cc	30	60	125	200	250	500
Each	.85	.95	1.15	1.25	1.80	3.00

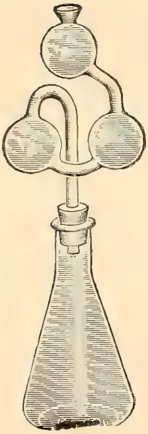
5100 **Test Glasses—Sedimentation.** Same as No. 5090 above, but graduated in ounces.

No.	A	B	C	D	E	F
Capacity, oz.	1	2	4	6	8	16
Each	.75	.85	1.00	1.20	1.65	3.00

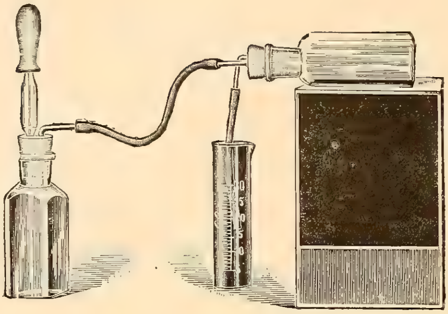


18530

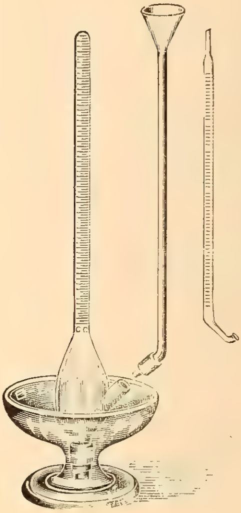
18530 **Test Glass, Sedimentation—Spaeth's.** With perforated stopper at bottom; offers advantages over ordinary forms as sediment is collected in the stopper and can be removed with stopper, saving troublesome operation of removing sediment from bottom of glass; is easier to clean than ordinary forms________________________Each 3.00



18535

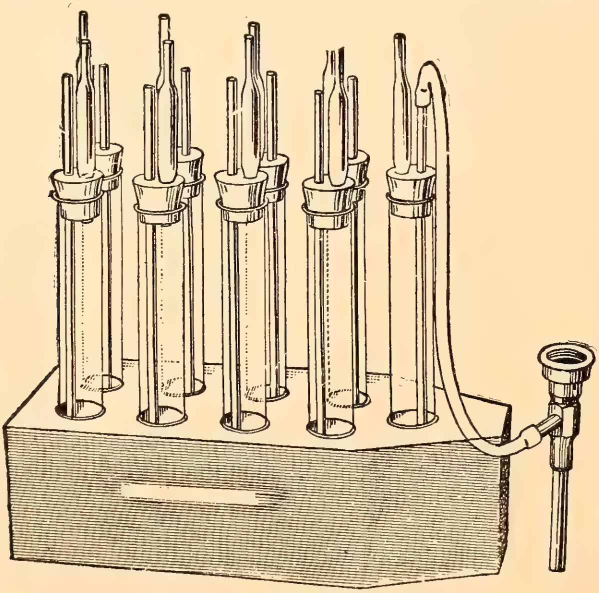


18545



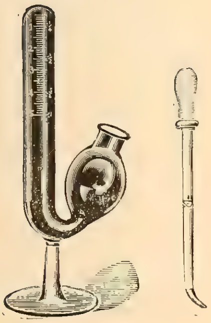
18540

18535	**Urea Apparatus—Folin's.** Consists of special urea bulb, flask and rubber stopper	Each	1.80
18540	**Urea Apparatus—Marshall's.** On foot	Each	3.50
18545	**Urea Apparatus—Squibb's.** For quantitative determination of urea in urine by displacement; furnished with 50 cc bottle of reagent; complete with percentage table and directions for use	Each	3.40



18550

18550	**Urea Apparatus—Van Slyke-Cullen.** For determination of urea in blood and urine; consists of 9 heavy walled glass test tubes fitted with two-hole rubber stoppers, through which are inserted Folin Ammonia Absorption tubes and connecting tubes, mounted in a heavy wooden block; furnished complete with rubber connecting tubes, brass filter pump and a 5 gram bottle of urease	Each	16.00
18555	**Urea Apparatus—Van Slyke-Cullen.** Same as No. 18550 above, but without filter pump	Each	14.50



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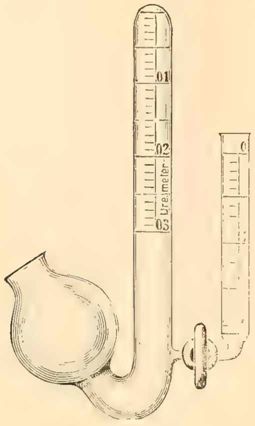

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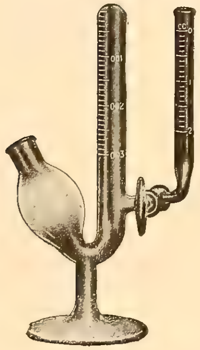
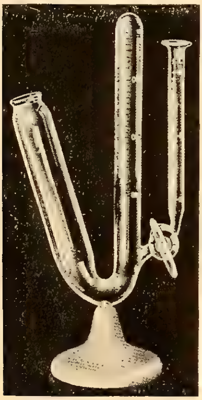


18575

18560	**Ureometer—Doremus'.** For rapid quantitative determination of urea in urine by hypobromite method; consists of graduated pipette for introducing urine, and fermentation tube graduated to read to one-tenth per cent.	Each	.80
18565	**Ureometer—Doremus'.** Same as No. 18560, but with glass foot	Each	.95
18570	**Ureometer—Doremus-Hind's.** Improved form, with graduated side tube with glass stopcock from which the exact amount of urine may be introduced into fermentation tube without any gas escaping from bulb; without foot	Each	4.00
18575	**Ureometer—Doremus-Hind's.** Same as No. 18570, but with glass foot	Each	4.50



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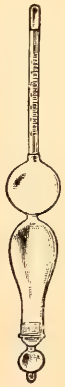

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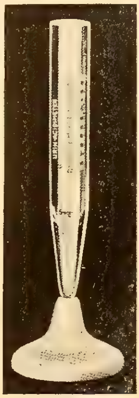


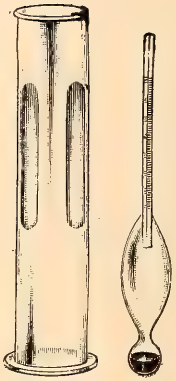
15590

18595

18580	**Ureometer—Doremus-Hind's.** Standard quality; fitted with Universal sanitary base	Each	4.20
18585	**Uricometer—Ruhemann's.** For quantitative determination of uric acid	Each	3.50
18590	**Urino-Acidometer.** Standard quality; equipped with Universal sanitary base	Each	1.00
18595	**Urino-Picnometer—Saxe's.** For the determination of specific gravity of small amounts of urine; requires only about 3 cc; furnished with cylinder in box	Each	3.00
18600	**Urino-Picnometer—Saxe's.** Same as No. 18595 above, but without cylinder	Each	2.50

18605

18620



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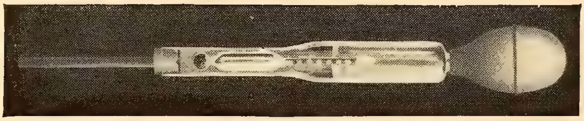
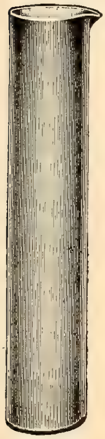
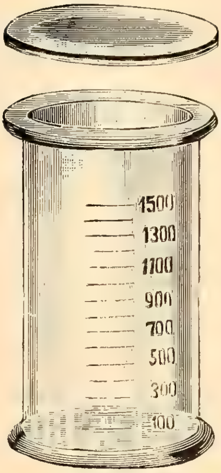


18618

18605	**Urinometer and Jar.** For 1 oz. tests; furnished with separate engraved thermometer showing temperature corrections for urine; standard quality	Each	3.00
18610	**Urinometer and Jar.** Same as No. 18605 above, but without thermometer	Each	1.50
18615	**Urinometer.** This is a combination specific gravity and temperature urinometer; for 2 oz. tests; standard quality, accurate and efficient	Each	5.00
18618	**Urinometer—New Form.** Devised on principle of chargometer or specific gravity instrument for testing battery fluids. Urine is drawn up by means of the rubber bulb and when at rest the specific gravity is read off directly. Simple, clean, time-saving and sufficiently accurate for ordinary work. Furnished complete with guaranteed accurate float with mercury bulb	Each	3.00
	Rubber Bulb for above	Each	.75
	Glass Barrel for above	Each	.75
	End piece for above	Each	.75
18620	**Urinometer—Neubauer-Vogel's.** For determining specific gravity of urine; set of two, graduated respectively, 1.000 to 1.020 and 1.020 to 1.040; with cylinder; complete with directions	Each	1.80
18630	**Urinometer—Squibb's Style.** For determining specific gravity of urine; graduated from 1.000 to 1.060; length, 120 mm; furnished in case with cylinder and directions for use; without thermometer	Each	1.00
18635	**Urinometer—Squibb's Style.** Same as No. 18630, but with thermometer	Each	2.50
18640	Urinometer Jar—Squibb's Style	Each	.20



18645



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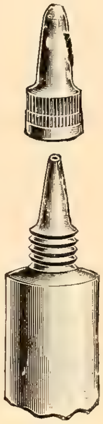


18660

18650

18645 **Urinometer Jar.** Plain; hand made; capacity, 2 oz.; diameter, 28 mm; length, 150 mm ---------- Each .15

18650 **Urinometer Jar.** Graduated up to 2 oz.; hand made; diameter, 28 mm; length, 150 mm ---------- Each .30

18655 **Urine Jar.** Graduated; with ground-on cover; capacity, 2 liters --- Each 2.00

18660 **Vaseline.** Put up in collapsible 1-oz. tube with very fine point, being extremely convenient for securing fine ribbon or thread of vaseline around concavity of a hollow ground slide, for the purpose of sealing the cover glass, thus preventing evaporation of hanging drop cultures or specimens ---------- Per tube .25
Per doz. tubes 2.40

B.-L. O. CO.
B.-L. O. CO.
B.-L. O. CO.

5435

5440

5445

5435 **Vials.** With flat bottom, slight neck and ground-in, air-tight stopper; so-called "Specimen" vials.

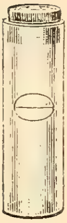
No.	AA	A	B
Capacity, cc	2	4	8
Each	.12	.15	.15

5440 **Vials.** With flat bottom and glass stopper; without neck.

No.	A	B	C	D
Diameter, mm	16	18	20	25
Height, mm	50	65	80	80
Each	.20	.20	.25	.25

5445 **Vials.** Homeopathic; short form; with neck, flat bottom and cork-lined metal screw-cap.

No.	A	B	C	D	E
Capacity, drams	1	1½	2	3	4
Per Gross	3.25	3.75	3.75	4.25	5.50
No.	F	G	H	I	J
Capacity, drams	6	8	10	12	14
Per Gross	8.00	9.00	10.50	11.75	13.00



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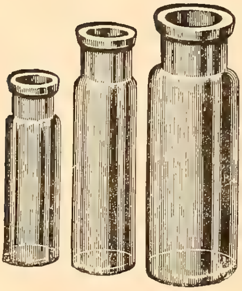

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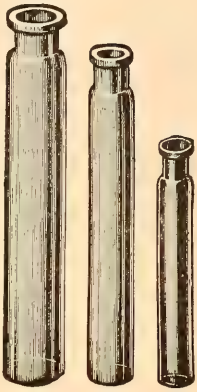


5465

5450 **Vials—Tube Form.** So-called "Shell Vials"; of clear white glass; without constriction at neck; with flat bottom.

Size No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Height, mm	15	25	25	25	30	30	35	35	38	38
Diameter, mm	12	5	8	15	10	12	8	10	12	16
Per Gross	**1.85**	**1.85**	**1.85**	**2.10**	**1.40**	**1.40**	**1.40**	**1.40**	**1.40**	**1.70**

Size No.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Height, mm	40	40	40	40	40	40	40	45	45	50
Diameter, mm	5	6	8	9	10	18	20	15	20	12
Per Gross	**1.40**	**1.40**	**1.40**	**1.40**	**1.40**	**1.85**	**2.25**	**1.55**	**2.45**	**1.40**

Size No.	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Height	50	50	50	50	55	55	60	60	60	60
Diameter, mm	16	20	23	25	13	15	8	9	13	12
Per Gross	**1.70**	**2.45**	**3.10**	**4.10**	**1.70**	**1.70**	**1.40**	**1.40**	**1.70**	**1.40**

Size No.	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
Height, mm	60	60	60	60	65	65	65	65	65	70
Diameter, mm	15	20	25	30	20	22	25	27	30	9
Per Gross	**1.70**	**2.80**	**4.10**	**8.20**	**2.80**	**3.70**	**4.10**	**5.15**	**8.20**	**1.55**

Size No.	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
Height, mm	70	70	70	75	75	75	75	75	75	75
Diameter, mm	15	22	25	9	11	12	14	15	18	20
Per Gross	**1.75**	**3.10**	**4.60**	**1.55**	**1.70**	**1.70**	**1.70**	**1.95**	**2.80**	**2.80**

Size No.	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
Height, mm	75	80	80	80	80	85	90	90	90	90
Diameter, mm	25	13	16	20	25	20	12	20	22	30
Per Gross	**4.10**	**1.80**	**2.20**	**2.75**	**4.10**	**3.30**	**1.80**	**3.30**	**3.70**	**8.20**

Size No.	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**
Height, mm	90	100	100	100	100	110	115	125	150	150
Diameter, mm	34	18	25	28	30	40	13	32	28	30
Per Gross	**11.30**	**3.70**	**4.15**	**7.20**	**8.20**	**17.00**	**2.20**	**10.25**	**10.25**	**11.30**

5455 **Vials—Tube Form.** So-called "Shell Vials"; of amber glass; with flat bottom and cork stopper.

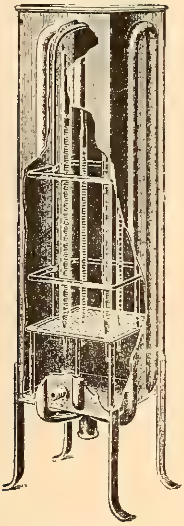
No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**
Height, mm	28	35	35	45	55	65	65	95	75
Diameter, mm	8	8	10	10	12	14	18	18	26
Per Gross	**1.80**	**1.80**	**1.80**	**1.80**	**1.90**	**2.30**	**2.95**	**3.60**	**7.00**

5460 **Vials.** Homeopathic; short form; with neck, flat bottom and cork stopper.

No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
Capacity, drams	⅛	¼	½	1	1½	2	3	4	6	8
Per Gross	**1.50**	**1.50**	**1.50**	**1.50**	**1.80**	**1.80**	**2.40**	**3.00**	**4.00**	**5.00**

5465 **Vials.** Homeopathic; long form; with neck, flat bottom and cork stopper.

No.	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
Capacity, drams	⅛	¼	½	1	1½	2	3	4	6	8
Per Gross	**1.50**	**1.50**	**1.50**	**1.50**	**1.80**	**1.80**	**2.40**	**3.00**	**4.00**	**5.00**



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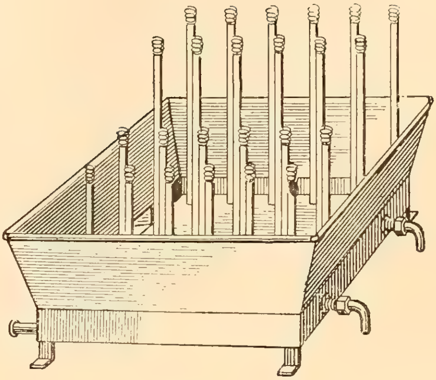
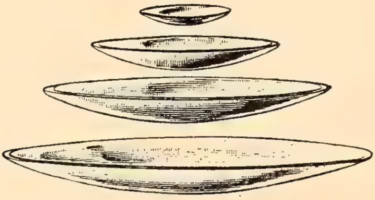


18665

18665 **Washing Apparatus.** For cleansing test tubes or bottles of all lengths, the longer tubes beng suitable for washing any tube up to 14 in. long, as the water, when turned into the high tube section by turning off the low service, will spout 6 or more inches in the air; made with 24 washing tubes, twelve 8-in. and twelve 12-in.; dimensions over all, 14 x 17 in.; provided with two control cocks; all 24 tubes can be used, where there are only short test tubes to be washed, and if the head of water has sufficient pressure; coiled springs prevent breakage of glassware, when inverted on washing tubes; construction of bath is best possible, being made throughout of heavy copper and brass; waste water will run off washer into sink at the vent shown at opposite end from the control cocks; hot or cold water can be used, as desired; inlet is at opposite end from control cocks; heavy rubber hose of ample length is furnished to connect to usual water supply -- Each **54.00**

18670 **Washing Apparatus.** For pipettes; made of copper, tinned inside and polished outside; has brass feet and brass pipe; hot or cold water may be used; dimensions of tank: 15 x 15 x 75 cm high; height over all, 90 cm --Each **48.00**

Washing Apparatus for Babcock Bottles Is Listed on Page 325 Under Milk Testing Apparatus.



5470

5475

5470 Watch Glasses. Of well-annealed glass; thin; concave; with edges smoothly ground.

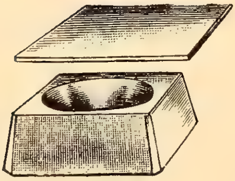
No.	A	B	C	D	E	F
Diameter, mm	25	30	40	50	65	75
Per Ten	.25	.25	.25	.30	.40	.45
No.	**G**	**H**	**I**	**J**	**K**	**L**
Diameter, mm	85	100	115	125	140	150
Per Ten	**.50**	**.60**	**.65**	**.75**	**1.00**	**1.10**
No.	**M**	**N**	**O**	**P**		
Diameter, mm	165	175	200	225		
Per Ten	**1.70**	**1.50**	**1.80**	**2.50**		

5475 Watch Glasses. In pairs; with edges accurately ground together; not to be confused with counterpoised watch glasses.

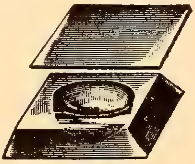
No.	A	B
Diameter, mm	50	65
Per Pair	**.30**	**.35**

5480 Watch Glasses—Balance. Counterpoised in pairs; accurately adjusted for interchangeable use on analytical balance pans.

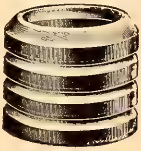
Diameter, mm	50	65	75
No.	**A**	**B**	**C**
Per Pair	**1.50**	**1.50**	**1.50**



5490



5495



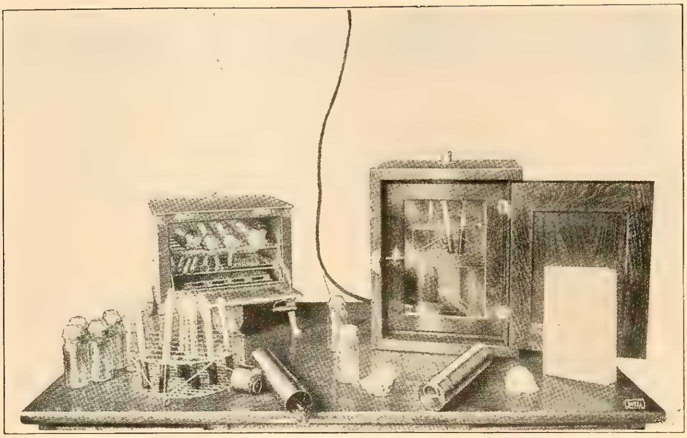
5497

5490 Watch Glass. Square form; consists of glass, 40 mm square, with a concavity; one vertical surface ground for writing upon; bottom of concavity fairly flat, but with mold, or unpolished finish; with cover ....Per ten **2.00**

5495 Watch Glass. Square form; same as No. 5490 above, but with polished spherical cavity ....Per ten **3.00**

5497 Watch Glass. .Syracuse Solid. Improved form; most convenient for handling without danger from dropping; will withstand more hard usage without breaking or chipping than any other form; bottom surfaces are parallel, making it possible to examine objects in the glass without distortion, while the slight curvature around the inside of the bottom permits easy use of the section lifter; flange around bottom permits glasses to be stacked securely......Per ten **.60**

5498 Watch Glass—Syracuse Solid. Same as No. 5497 above, but with ground beveled surface for writing upon..................Per ten **.85**

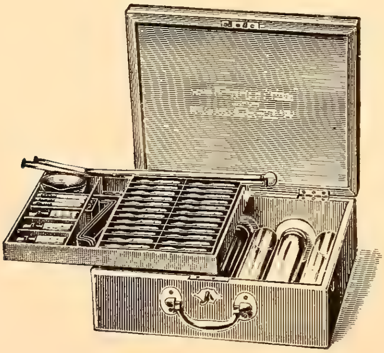


18675

Water Testing Apparatus

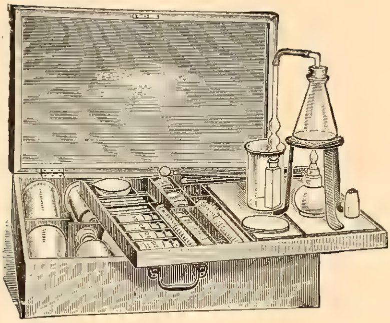
18675 **Water Testing Outfit—Bacteriological.** Designed to enable anyone, without particular training or skill, to test water for pollution; outfit consists of incubator complete, including 37°C adjustable thermostat, thermometer, shelves, etc., 100 sets Jackson bile tubes, 1 liter lactose bile or lactose broth, 24 graduated 1 cc pipettes, 2 copper sterilizing cases for pipettes, 12 ground glass stoppered bottles (4 oz.), 2 bile tube racks, 1 electric sterilizing oven, 1 Arnold sterilizer for sterilizing tubes, supply of tinfoil and 8 oz. sterilized cotton -- Each **125.00**

(Please state voltage and current when ordering)



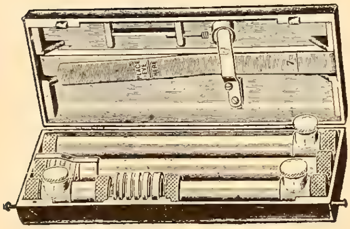
18680

18680 **Water Analysis Case.** Convenient hand-case, providing apparatus, reagents, etc., for examining water samples at source of supply and determining suitability for drinking and domestic purposes; dimensions, 12½ x 10½ x 4½ in.; contains nickel evaporating dish, Erlenmeyer flask, tripod, spirit-lamp, 100 cc and other graduated cylinders, capsules of "Soloid" brand Nessler's Solution, "Soloid" brand products of Silver Nitrate, Metaphenylenediamine Sulphate, Potassium Permanganate, Potassium Chromate, Potassium Ferrocyanide, Sodium Acid Sulphate, Soap, Zinc Dust, etc.; furnished in non-warping, seasoned wood, with mahogany finish---------------------------------Each **26.25**
(Any pieces of the apparatus or supplies can be replaced separately.)

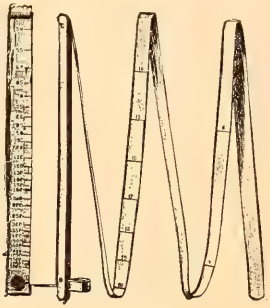


18685

18685	**Water and Sewage Analysis Case.** Of non-warping seasoned wood, with mahogany finish; dimensions, 18½ x 12½ x 5¼ in.; contains very complete equipment, especially adapted for examination of water and sewage effluents; includes supply of necessary reagents and apparatus, such as special distillation outfit for estimation of ammonia Each	**40.15**

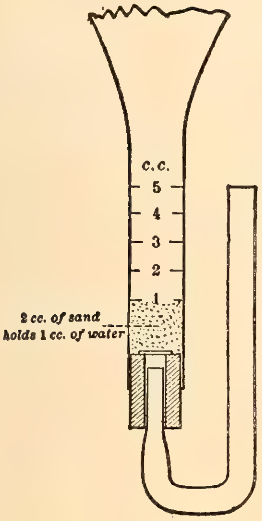


18700

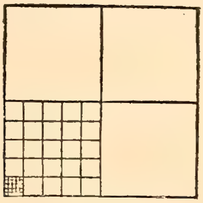


18695

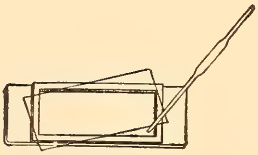
18690	**Colorimeter—U. S. Geological Survey Standard.** For determining color in water analysis, by comparing color of water under examination with that of series of glass disks, rated in color values according to the platinum-cobalt scale of parts of platinum per million; furnished complete, with four aluminum tubes—one with clips for holding disks, others 50, 100 and 200 mm long, respectively, for holding water to be tested—and six standard disks of amber-colored glass, mounted in aluminum; in compact morocco-covered case Each	**49.50**
18695	**Turbidity Scale—U. S. Geological Survey Standard.** Of aluminum, 8 in. long and graduated in parts per million; to one end is attached a tape, 4 ft. long and similarly graduated; into other end is fastened a nickel-plated brass screw eye, containing a piece of rolled platinum wire to be viewed; depth of its disappearance to the eye indicates turbidity; complete in case Each	**9.00**
18700	**Colorimeter and Turbidity Outfit.** Consists of Nos. 18690 and 18695 above, combined in morocco-covered case Each	**56.00**



18705

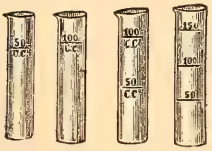


18740

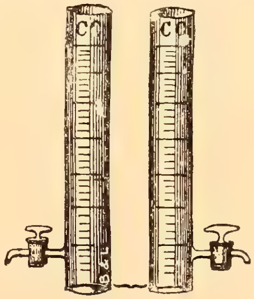


18730

18705	**Sedgwick-Rafter Funnel.** Graduated; with attachment and rubber stopper	Each	3.00
18710	**Sedgwick-Rafter Funnel.** Plain; with attachment and rubber stopper	Each	2.00
18715	**Berkshire Sand**	Per lb.	.15
18720	**Bolting Cloth Discs**	Per doz.	.35
18725	**Support for Funnel**	Each	1.25
18730	**Counting Cell,** including 3 cover glasses	Each	4.50
18735	**Cover Slip**	Each	.10
		Per dozen	.75
18740	**Eye-Piece Micrometer**	Each	5.25
18745	**Pipettes.** 1 cc capacity	Each	.25
18750	**Graduated Flasks.** 25 cc capacity	Each	.40



2180



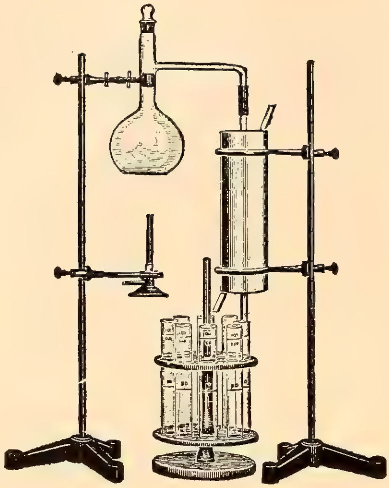
2175

2175 **Color Comparator—Hehner's.** For estimation of iron in water; consists of two graduated glass cylinders of same size and graduation, with stopcocks — Per pair 9.00

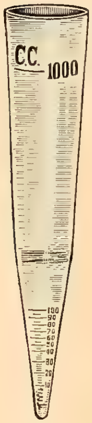
2180 **Color Comparison Tubes—Nessler's.** For the determination of ammonia in water; of clear colorless glass, with polished bottom.

No.	A	B	C	D
Graduated, cc	50	100	50–100	50–100–150
Each	.75	.90	1.20	1.50

2375



18755



2380

2185

2185 **Color Comparison Tubes—Nessler's.** Tall form; with polished bottoms made from clear glass. The 50 cc mark on the 50 cc tube is between 200 and 250 mm from the bottom and the 100 cc mark on the 100 cc tube is between 275 and 325 mm from bottom. Tubes in sets of six or twelve have 50 cc or 100 cc mark within 6 mm of same height. See American Public Health Association, "Standard Methods of Water and Sewage Analysis," 1917.

No.	A	B
Capacity, cc	50	100
Each	.75	**1.00**
Set of 6	4.75	**7.00**
Set of 12	**10.00**	**15.00**

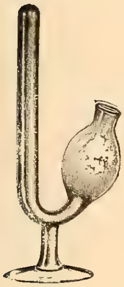
2190 **Color Comparison Tubes—Nessler's.** Tall form; with bottom ground and polished.

No.	A	B	C	D
Graduated, cc	50	100	50–100	50–100–150
Length, mm	300	375	375	450
Each	**1.00**	**1.50**	**1.80**	**2.25**

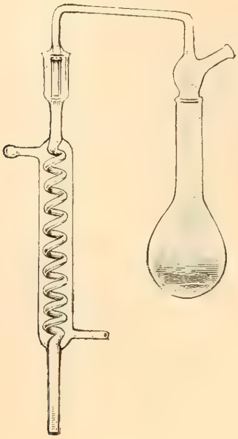
2375 **Cylinder.** For testing sewage; with conical graduated from tip upward at points from 0 to 50 cc; total capacity, 1000 cc--------Each 3.75

2380 **Cylinder.** For testing sewage; of conical shape throughout; graduated from tip up, at points from 0 to 100 cc; total capacity, 1000 cc -- Each 3.40

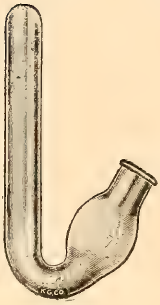
18755 **Distilling Apparatus.** For determination of ammonia in water; used by Department of Health of New York City; consists of metal condenser with block tin condenser tube, eight Nessler cylinders graduated at 50 cc and 100 cc in revolving support; furnished complete with flask, condenser, support, eight Nessler jars and support for same --Each 25.00



18760



2510

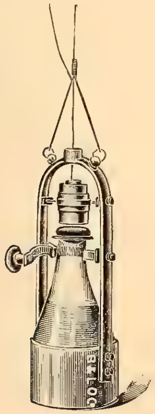


18765

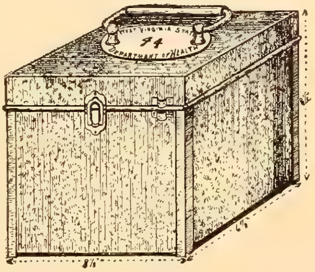
2510 **Distilling Apparatus.** For determination of ammonia in water; connecting tube is provided with inlet to allow permanganate solution being easily poured into flask after free ammonia has been distilled off; mercury seal connection with condenser insures perfect joint and easy disconnection -- Each 10.50

18760 **Fermentation Tube.** Ungraduated; with glass foot; American Public Health Association standard; inside diameter of upright tube, 15 mm; length of vertical tube, 140 mm; diameter of bulb, 38 mm -- Each .75

18765 **Fermentation Tube.** Same as No. 18760 above, but without foot -- Each .50



18770

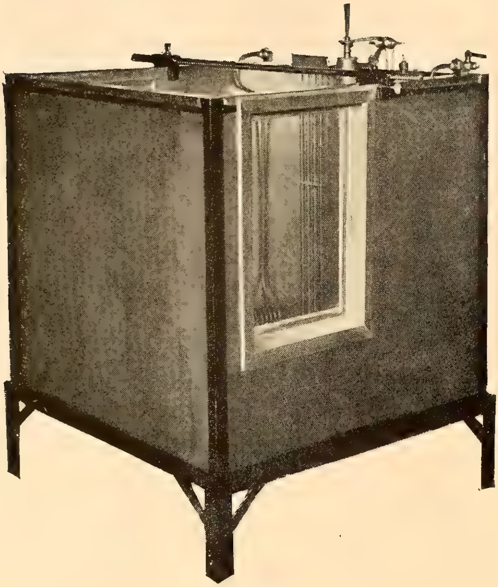


18775

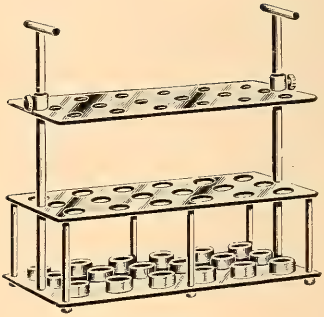
18770 **Water Sampling Apparatus—Esmarch's.** Consists of glass bottle in metal frame with parts so arranged that when apparatus is lowered to desired depth the stopper is removed, whereupon bottle fills, after which stopper is replaced ------------------------------------- Each 8.00

18775 **Sample Bottle Cases.** Will hold sufficient ice to maintain the samples at a low temperature for nearly forty-eight hours, even in hottest weather; made of heavy galvanized iron, with double walls, space between walls being packed with Nonpariel cork board for insulation; lids securely fastened with brass hinges and slasp; loops provided on cover and box so that case can be sealed; accommodates 2 oz. bottles.

No.	A	B	C
Capacity, bottles	4	6	12
Each	12.00	17.00	21.50



18780



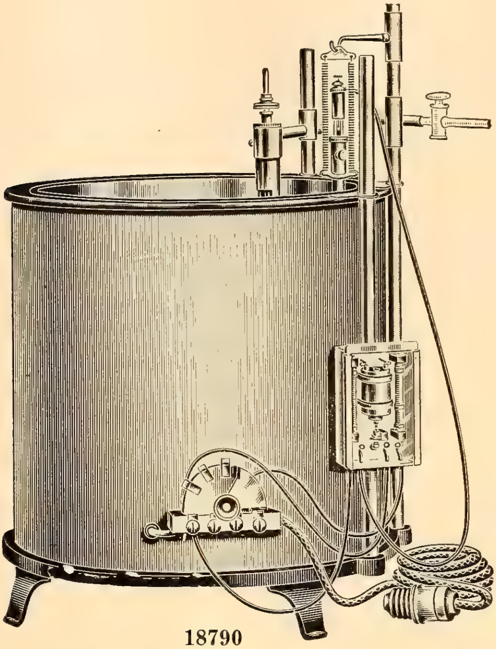
18785

18780 Water Bath—De Khotinsky's, Stationary. Rests on frame of 25 mm galvanized angle steel; inner lining is 0.75 mm sheet copper, nickel-plated; cover is of magnesia-asbestos, with cork linoleum as outside covering; edges are trimmed with nickel-plated copper; has two plate glass windows on opposite sides of bath; high-speed turbine stirrer takes water from bottom of bath at the rate of 45 liters per minute and delivers it at the top with expenditure of energy in the motor of 45 watts; nickel-plated coils are furnished to maintain temperature in summer; furnished with thermo-regulator suspended by two springs to prevent vibration; supplied with two nickel-plated brass rods and four brass clamps; for direct or alternating current.

No.	A	B	C	D	E	F	G	H
Inside Dimensions								
Length, cm	71	71	71	71	61	61	61	61
Width, cm	70	70	70	70	61	61	61	61
Depth, cm	61	61	61	61	61	61	61	61
Capacity, liters	300	300	300	300	225	225	225	225
Voltage	110	110	220	220	110	110	220	220
Current	D.	A.	D.	A.	D.	A.	D.	A.
Each	300.00	302.50	302.50	305.00	275.00	277.50	277.50	280.00

18781	**Rod Clamps for above bath**	Each	1.25
18785	**Water Bath Racks.** For 18 Vaccine Tubes	Each	5.00
18786	**Water Bath Racks.** For 48 Wassermann tubes	Each	4.50

Microtomes, Microscopes, Incubators, Sterilizers for every need.



18790

18790 Water Bath—De Khotinsky's, Portable. This is a constant temperature bath, consisting of copper container, nickel-plated inside and out and insulated with magnesia-asbestos, protected on outside by sheet of Russian iron; mounted on enameled cast-iron base, with nickel-plated rods for attaching laboratory clamps to support flasks, etc.; furnished with four electric heating units, connected to relay and automatically operated by thermo-regulator, and a constant water level attachment.

Inside Dimensions	No. A	B	C	D
Diameter, cm	30.5	30.5	30.5	30.5
Available Height, cm	25	25	25	25
Capacity of Bath, liters	18.25	18.25	18.25	18.25
Precision of Regulation, degrees	0.10	0.10	0.10	0.10
Voltage	110	110	220	220
Current	D.	A.	D.	A.
Each	**96.00**	**98.50**	**98.50**	**101.00**

Inside Dimensions	No. E	F	G	H
Diameter, cm	25	25	25	25
Available Height, cm	19	19	19	19
Capacity of Bath, liters	9.3	9.3	9.3	9.3
Precision of Regulation, degrees	0.10	0.10	0.10	0.10
Voltage	110	110	220	220
Current	D.	A.	D.	A.
Each	**72.50**	**75.00**	**75.00**	**77.50**

In ordering state mean temperature desired, so that heating units of correct wattage are furnished.

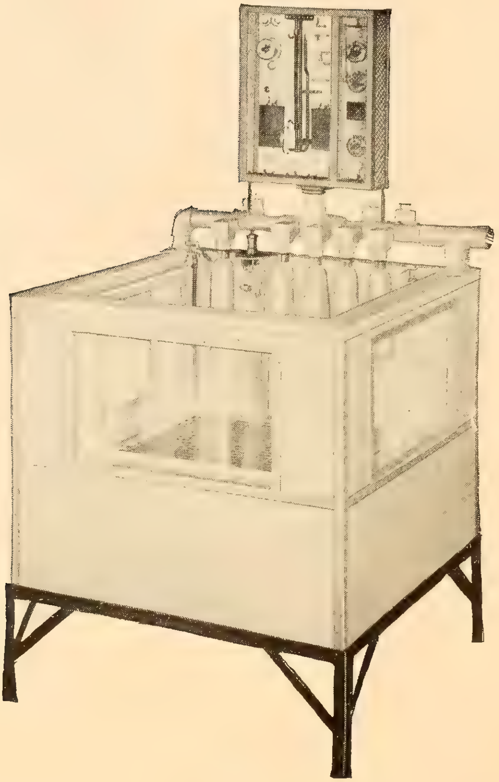
18792 **Water Bath Cooling Coil.** For No. 18790, four larger sizes______Each **10.00**

18793 **Water Bath Cooling Coil.** For No. 18790, four smaller sizes______Each **8.00**

18794. **Heating Units.** For No. 18790 above.

	No. A	B	C	D	E
Watts	44	44	60	60	75
Voltage	110	220	110	220	110
Each	**1.00**	**1.25**	**1.00**	**1.25**	**1.00**

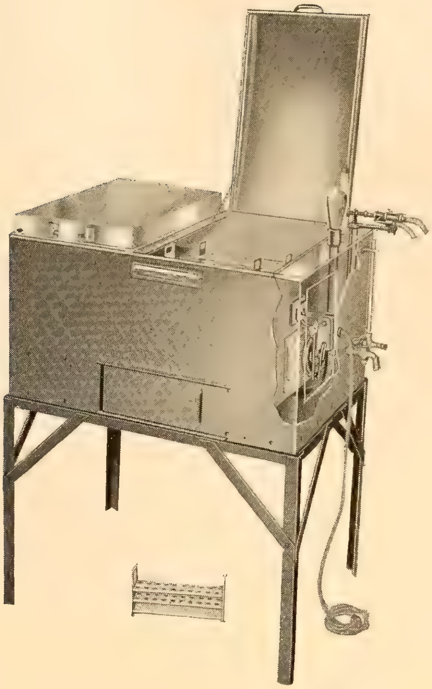
	No. F	G	H	I	J
Watts	75	115	115	140	140
Voltage	220	110	220	110	220
Each	**1.25**	**1.00**	**1.25**	**1.00**	**1.25**



18817

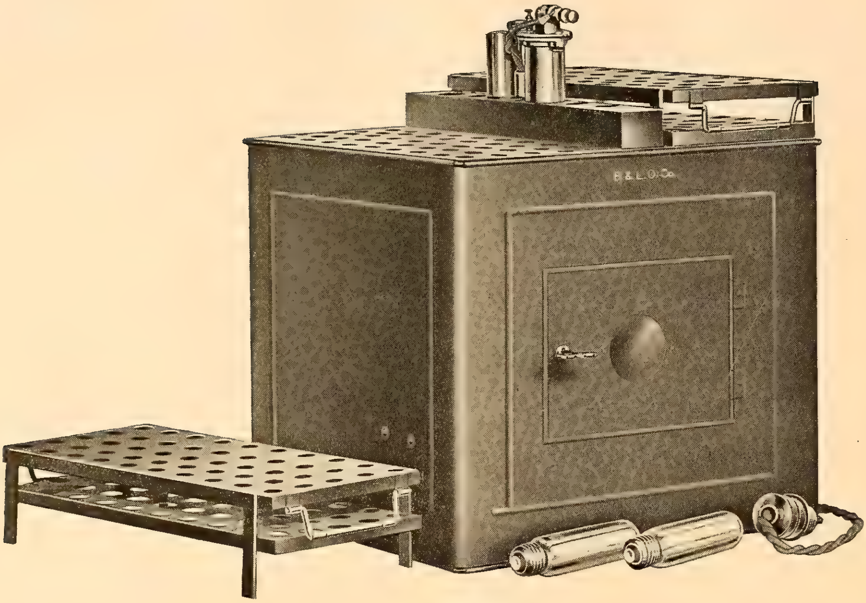
18817 **Water Bath, Freas', Sensitive Water Thermostat.** Designed to furnish continuous constant temperature up to about 50 degrees C in a room of ordinary temperature. Has extreme accuracy and small variation, not exceeding 2/1000 of a degree, especially suitable for the refined measurements of physico-chemical work, botanical investigations, exact specific gravity determinations, etc. The outfit consists of a well insulated tank of 340 liters water capacity, provided with spacious glass windows for observations, and perforated shelf on which the experimental work can be placed. The tank is equipped with a stirring device, a mercury regulator which controls the heat through a thermal relay, low thermal capacity long cylindrical form filament lamps, and a motor suspended on adjustable springs for maintaining the water at constant level, and for cooling the water in the tank when the room temperature is too great. About twelve pounds of redistilled mercury are required for the regulator. Dimensions: 38 in. long, 38 in. wide, 40 in. high------------------Each **415.00**

"Bioloid" Materials for Reagent Purposes.



18820

18820	**Water Bath—Wasserman—Army Medical School Model.** Permits the use of a large volume of water, which holds its temperature with the minimum expenditure of heat, as it is surrounded by a case of polished, rust resisting iron, lined with a heavy layer of asbestos; lid is made double, the outer, or top, being flat, and the inner sloping to the rear; constant level which maintains correct height of water in bath is very simple, and can be connected with two rubber hose, one from the water supply and the other to the waste pipe; furnished with thermometer, gas thermo regulator and two micro burners; standard size; dimensions over all: 82½ x 60 x 110 cm high; gas heated ----------Each	180.00
18825	**Water Bath, Wasserman—Army Medical School Model.** Same as above, but electrically heated, equipment including electro regulator and all necessary connections for use on either 110 or 220 volts----------Each **(Please state voltage and current when ordering)**	252.00
18830	**Water Bath, Wasserman—Army Medical School Model.** Same as No. 18820 above, but half size; dimensions over all: 67½ x 45 x 110 cm high; gas heated ----------Each	144.00
18835	**Water Bath, Wasserman—Army Medical School Model.** Same as No. 18830 above, but electrically heated, equipment including electro regulator and all necessary connections for use on either 110 or 220 volts ----------Each **(Please state voltage and current when ordering)**	216.00
18840	**Water Bath, Wasserman—Army Medical School Model.** Same as No. 18820, but quarter size; dimensions over all: 37½ x 52½ x 110 cm high; gas heated ----------Each	102.00
18845	**Water Bath, Wasserman—Army Medical School Model.** Same as No. 18840 above, but electrically heated, equipment including electro-regulator and all necessary connections for use on either 110 or 220 volts ----------Each **(Please state voltage and current when ordering)**	174.00



18850

18850 **Water Bath—Wasserman.** Designed by Dr. Wm. Krauss of Memphis, tenn. It is essentially a dry water bath; each test tube rests in its own pocket surrounded by water kept at incubator temperature. There is no evaporation, no wetting or steaming of tubes. The source of heat is two tube lights in tunnels at the bottom of the bath controlled by a make-and-break of a differentially expanding couple, making a system sensitive and constant to a fraction of a degree, independent of exterior temperature. The elevated portion with the tubulatures insures water contact the full height of the pockets. Large sockets are in this portion for stock salt solution, also tubulature for filling, for the thermometer and for the thermostat.

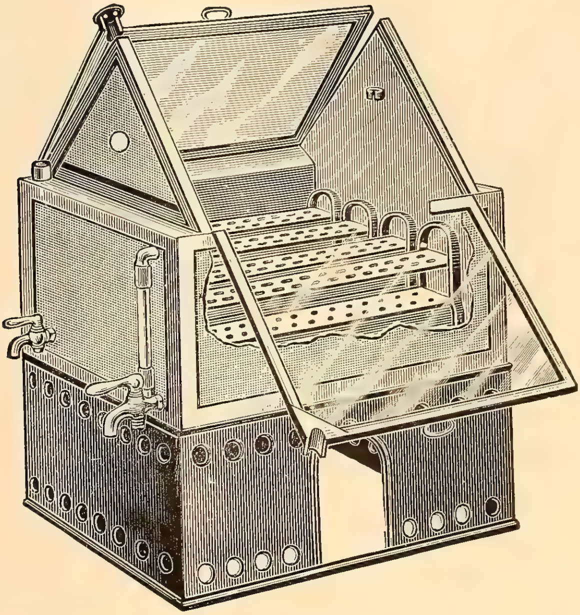
The separate false top is a lifting rack permitting frequent inspection of all tubes while maintaining uniform incubation; each tube at all times gets the same incubation time.

The larger bath as illustrated has a valuable additional feature in the shaking rack. Since the tubes in this bath do not have to be removed for shaking, no numbering is necessary, each tube remaining in its place during the entire operation.

The larger bath has two racks for five by ten tubes, respectively. The smaller bath has four rows of ten tubes.

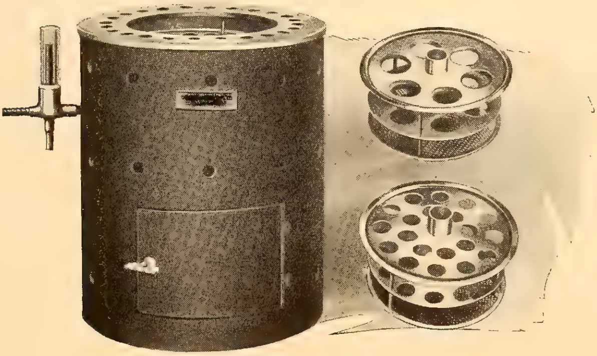
Outside dimensions:	No. A	B
Width, cm	36	23
Depth, cm	36	36
Each	**140.00**	**100.00**

Microscopic Appliances of every description.



18855

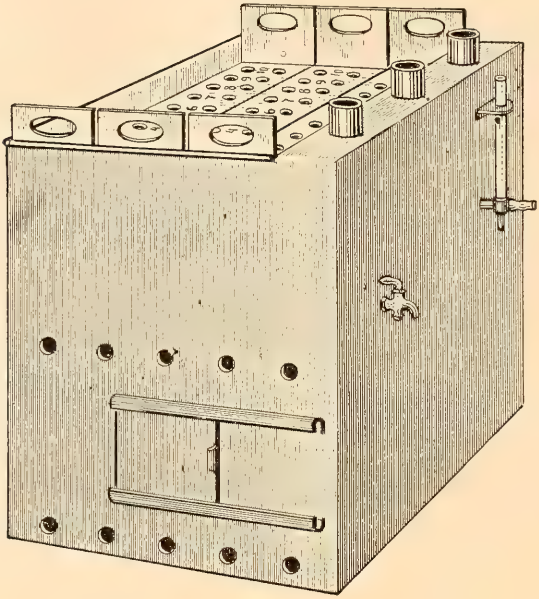
18855 **Water Bath—Wasserman.** Has four copper racks, each with a capacity of 24 blood tubes; slanting doors which meet at the top prevent condensed moisture from dripping into the tubes; has double wall of heavy copper, tinned inside, and covered on outside with insulating material; stopcocks provide water outlets for bath and jacket; mounted on base 23 cm high; furnished with tubulations for a regulator and thermometer; outside dimensions: height, 46 cm; width, 46 cm; depth, 41 cm——Each 93.75



18860

18860 **Water Bath Inactivation—Miller.** Constructed of Russia iron, insulated with asbestos to maintain the 56° temperature with minimum gas consumption; water compartment is of heavy tinned copper; design of test-tube holders permits all large or all small tubes to be used, or one row of large, and one of small; tubes always remain upright; supplied with outer ring for ½ inch tubes and two inner rings for ¾ and 1¼ inch tubes respectively; equipment includes constant level; inside dimensions: diameter, 28 cm; height, 31 cm——Each 48.00

18865 **Water Bath, Inactivation.** Same as above, but of 20 cm diameter——Each 36.00



18870

18870 **Water Bath, Inactivation—Neuman.** Made of copper, with opening for thermometer; outer casing made of polished iron, lined with asbestos; size, 30 x 32½ x 35 cm high; capacity, 6 racks; for gas -- Each 30.00

18875 **Water Bath, Inactivation—Neuman.** Same as No. 18870 above, but for electricity ---Each 66.00

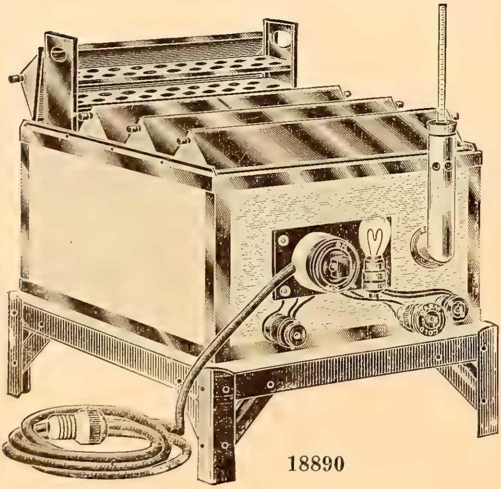
(Please state voltage and current when ordering)

18880 **Water Bath, Inactivation—Neuman.** Similar to No. 18870 above; size, 20 x 27½ x 35 cm high; capacity, 3 racks; for gas-------------Each 26.50

18885 **Water Bath, Inactivation—Neuman.** Same as No. 18880 above, but for electricity ---Each 62.50

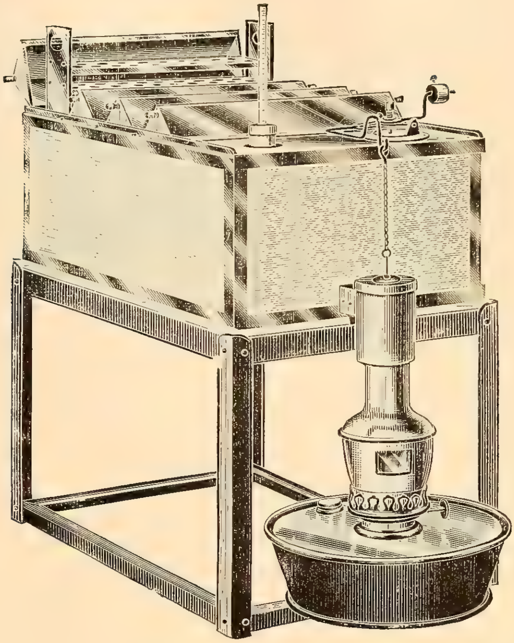
(Please state voltage and current when ordering)

18890 **Water Bath—Constant Temperature.** Gable type; made from heavy copper, tinned on inside; sides and bottom are covered on outside with thick insulating material to prevent radiation; equipped with hinged gables as protection from dust and to minimize evaporation of water; furnished with test tube racks; electrically heated; equipped with pencil type thermostat and snap switch controlling part of the heating units for the purpose of changing temperature from 37½°C to 56°C if such change should be desired.



18890

No.	A	B
Length, cm	50	33½
Width, cm	26½	26½
Depth, cm	15	15
Each	**90.00**	**75.00**



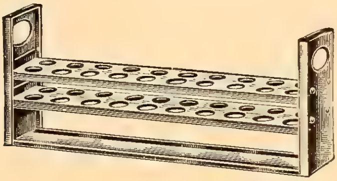
18900

18895 **Water Bath—Constant Temperature.** Same as No. 18890 above, but for gas, furnished with capsule type thermostat; for a temperature of 37½°C only.

No.	A	B
Length, cm	50	33½
Width, cm	26½	26½
Depth, cm	15	15
Each	**90.00**	**75.00**

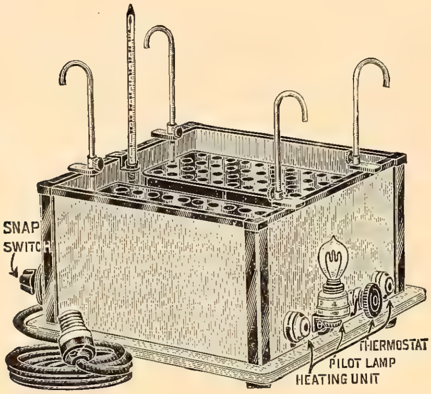
18900 **Water Bath—Constant Temperature.** Same as No. 18890 above, but for oil heating.

No.	A	B
Length, cm	50	33½
Width, cm	26½	26½
Depth, cm	15	15
Each	100.00	80.00

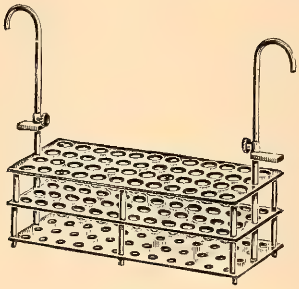


18902

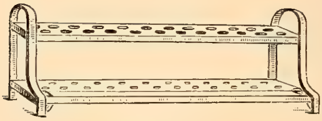
18902 **Water Bath—Test Tube Rack.** Used in connection with Constant Temperature Water Bath, Nos. 18890, 18895, 18900; made of polished copper and furnished with two shelves......Each 3.00



18910



18917



18918

18910 **Water Bath—Constant Temperature.** Electrically heated; made from heavy copper, tinned on inside and covered on outside with a thick insulating material to prevent radiation; heating units are in metal tubes at bottom of bath; has pencil type thermostat for regulation of temperature; snap switch controls part of heating units for purpose of changing temperature from 37½°C to 56°C if such change should be desired; furnished with two test tube racks, each with capacity for 48 test tubes, 3 inches by ⅜ inches; length, 22½ cm; width, 22½ cm; depth, 12½ cm .... Each **60.00**

(Please state voltage and current when ordering)

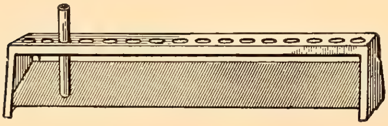
18915 **Water Bath—Constant Temperature.** Same as No. 18910 above, but with only one test tube rack .... Each **45.00**

(Please state voltage and current when ordering)

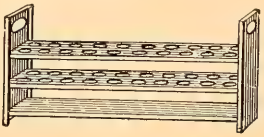
18917 **Water Bath—Test Tube Rack.** For Constant Temperature Water Baths No. 18910 and No. 18915; made from nickeled brass with adjustable supports for suspension in bath; furnished with two shelves; capacity, 48 test tubes, 3 inches by ⅜ inches; dimensions, 9 x 4 x 2½ inches high; height over all, 8 inches .... Each **5.50**

18918 **Supports—Wasserman.** To accommodate 10 pair of test tubes; spaces between holes consecutively numbered from 1 to 10; size: 250 x 50 mm; of polished copper .... Each **1.60**

18919 **Supports—Wasserman.** Same as 17750 above, but of galvanized iron .... Each **.80**



18920



18921

18920 **Supports—Wasserman.** Latest form; of galvanized iron, white enameled; with slanted bottom shelf.

No.	A	B
Size, mm	300 x 50	400 x 50
Capacity, tubes	12	16
Each	**1.60**	**2.00**

18921 **Supports for Wasserman Bath.** Of polished copper, for Wasserman tubes, 75 x 9 mm.

No.	A	B
No. of tubes	24	40
Each	**3.00**	**2.60**

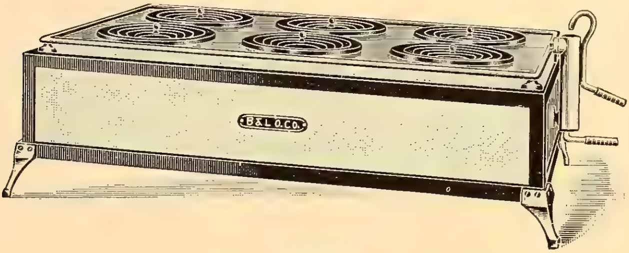
18922

18922 **Water Bath—Freas' Electric.** Automatically controlled; consists of heavy copper tank with heavy asbestos outer covering; has working space 4 inches deep by 12 in. by 18 in.; constant temperature regulator is the standard Freas bimetallic; without cover; constant temperature range is from room temperature up to about 65° C____________Each **130.00**

(Please state voltage and current when ordering)

18923 **Water Bath—Freas' Electric.** Same as No. 18810, but with cover; temperature range is from room temperature up to about the boiling point of water ____Each **150.00**

(Please state voltage and current when ordering)

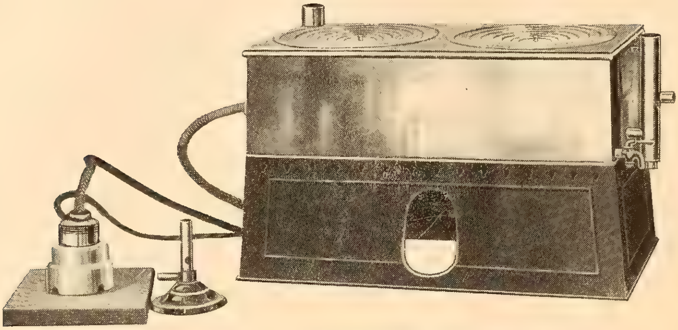


18925

18925 **Water Bath—Electric.** Equipped with constant level device and heating units, directly beneath water chamber and easy to reach; metal parts are brass or copper; has six 15 cm openings, each fitted with a set of rings; recommended especially for use in ether distillations or for evaporation of substances, vapors of which might easily become ignited if a water bath heated by gas were used__Each **70.00**

(Please state voltage and current when ordering)

Electrical Appliances for every laboratory need.

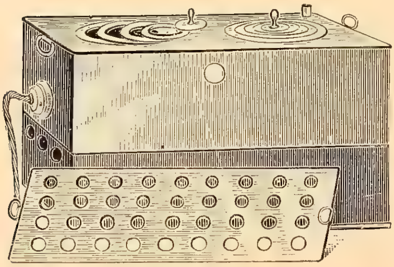


18930

18930 **Water Bath—Electric.** Constructed of heavy polished copper, tin lined and equipped with electric heating coil in water chamber; removable cover, provided with tubulation for thermometer, contains two sets (the large bath, four sets) of concentric rings, affording openings with range from 2.5 to 15 cm; removable copper tray rests inside of bath, supported by brackets; fitted with constant water level and brass faucet for drawing off water; supported on sheet-iron base 15 cm high; furnished complete, ready to attach to a lamp socket.

No.	A	B
Height, cm	13	13
Width, cm	38	38
Depth, cm	38	20
Each	52.50	35.00

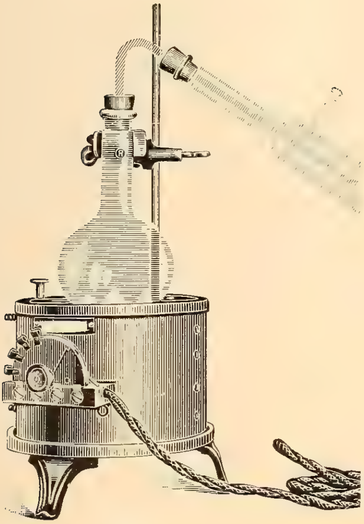
(Please state voltage and current when ordering)



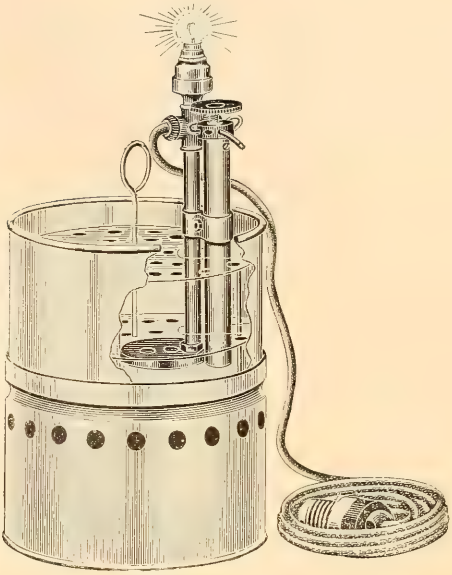
18935

18936 **Water Bath—Electric.** Of polished copper, 19 cm high; has two removable covers and automatic cut-out which shuts off current when bath is allowed to run dry; inside dimensions: length, 8 cm; width, 37 cm; depth, 17 cm..Each **40.50**

Laboratories completely furnished.

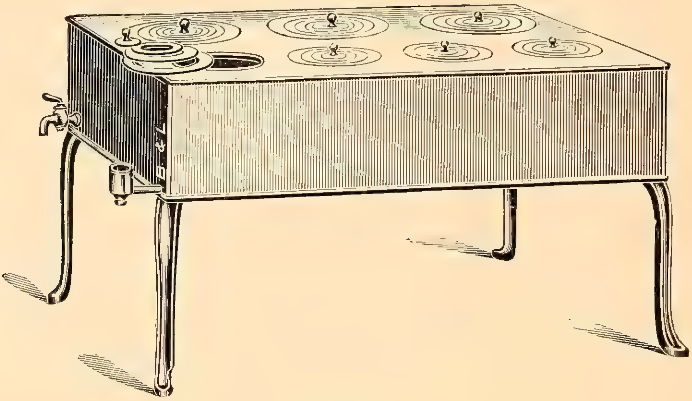


18937



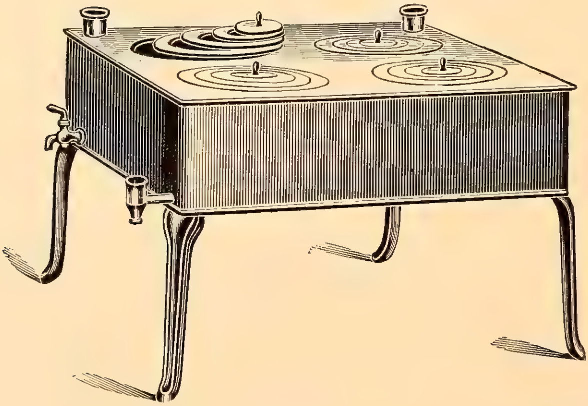
18942

18937	**Water Bath—De Khotinsky's, Electric.** Intended to replace the old Bunsen burner heated bath in laboratories where electricity is available; consists of a copper container, spun in one piece and nickel-plated, and protected by 25 mm of magnesia-asbestos, with outside covering of red fiber; mounted on enameled cast-iron base to which is attached a nickel-plated supporting rod for clamping apparatus in place; top is fitted with set of six porcelain rings to accommodate different sizes of flasks or evaporating dishes; heating units are in brass tubes inside the bath and 20 mm from bottom; has constant water level attachment with range of 25 mm, maintaining the level constant to within 1mm; for 110 volts, D. C. or A. C. ----------- Each	27.50
	(Please state voltage and current when ordering.)	
18938	**Heating Unit.** For No. 18937 ----------- Each	1.00
18939	**Water Bath—De Khotinsky's, Electric.** Same as No. 18937, but for 220 volts, D. C. or A. C. ----------- Each	30.00
	(Please state voltage and current when ordering.)	
18940	**Heating Unit.** For No. 18939 above ----------- Each	1.25
18942	**Thermostat—Pencil Type, Combined Electric Heater.** Special device for electrically heating the water and controlling its temperature in water baths; particularly desirable where constant temperature is sought; consists of heating disc, 8 cm in diameter x 13 mm in thickness, and an adjustable, pencil-type thermostat, measuring 15 cm in length x 1.5 cm in diameter, together with pilot lamp for indicating whether current is on or off; mounted together and self-contained; connection may be made with any 110-volt lamp socket; will maintain maximum temperature of 60° C in a bath containing not more than two quarts of water; constant water level is desirable for best results, and care should be taken that water covers at least one-third of tube containing thermostat ----------- Each	35.00
18944	**Thermostat—Pencil Type, Combination Electric Heater, with Water Bath.** Dimensions of heating disc: 12½ cm in diameter x 1¼ cm in thickness; furnished with Pencil Type Thermostat No. 18130 described above; height over all, 32½ cm; miximum current consumption, one ampere; water bath consists of cylindrical, tinned copper bath; inside dimensions: 15 cm in diameter x 10 cm in depth; has Russian iron base, 10 cm high; furnished with test tube rack, with 28 tubulations, ⅜ in. in diameter; complete ----------- Each	45.00



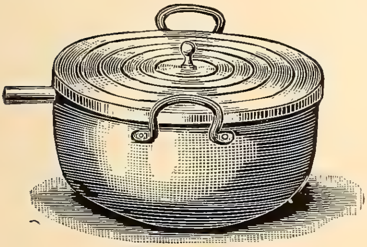
18945

18945	**Water Bath.** Made of highly polished copper, tin lined; provided with brass stopcock, constant water level attachment, extra sheet iron bottom, and four detachable legs; has seven openings, of which three are 150 mm diameter, with five copper rings and cover, and four are 100 mm diameter, with three concentric rings and cover; size, 580 x 340 x 130 mm……Each	27.00
18917	**Water Bath.** Same as above No. 18940, but arranged with coil for heating with steam……Each	33.00
18950	**Water Bath.** Same as above No. 18940, but electrically heated……Each	90.00

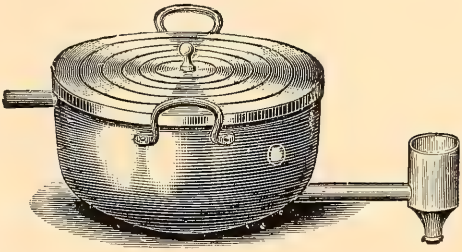


18955

18955	**Water Bath.** Same as No. 18940, but with four openings, each 125 mm diameter; size, 340 x 340 x 130 mm……Each	19.25
18960	**Water Bath.** Same as No. 18955, but arranged with coil for heating with steam……Each	24.00
18965	**Water Bath.** Same as No. 18955, but electrically heated……Each	67.50



18970



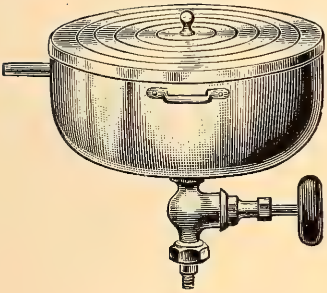
18975

18970 **Water Bath.** Made of heavy copper, tin lined, and provided with steam escape and set of concentric rings; hemispherical form.

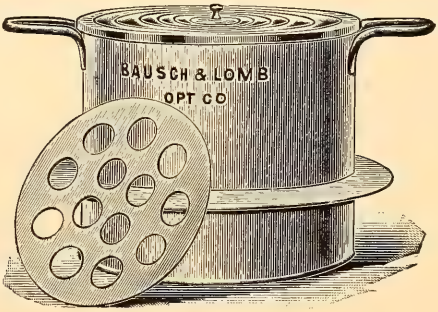
No.	A	B	C	D	E	F	G
Diameter, cm	10	13	14	15	20	25	31
Each	1.35	1.60	1.95	2.20	3.50	5.70	9.75

18975 **Water Bath.** Of polished copper, tin lined, with concentric copper rings and cover, Kekule's constant water level and steam escape.

No.	A	B	C	D	E	F	G
Diameter, cm	10	25	14	15	20	13	31
Each	2.60	2.85	3.20	3.45	4.75	7.00	11.00



18980



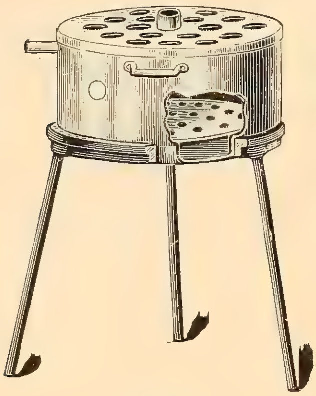
18985

18980 **Water Baths.** Similar to No. 18975, but provided with valve for use with steam.

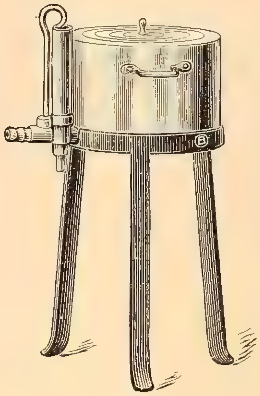
No.	A	B	C	D
Diameter, cm	15	20	25	31
Each	7.00	8.20	11.50	17.00

18985 **Water Baths.** Made of polished copper, tin lined; provided with cover, steam escape, concentric rings and a perforated plate for test tubes.

No.	A	B	C
Diameter, cm	13	15	20
Each	3.60	4.00	6.40



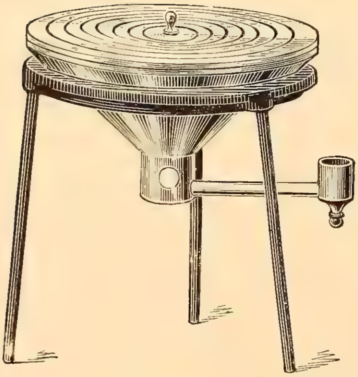
18990



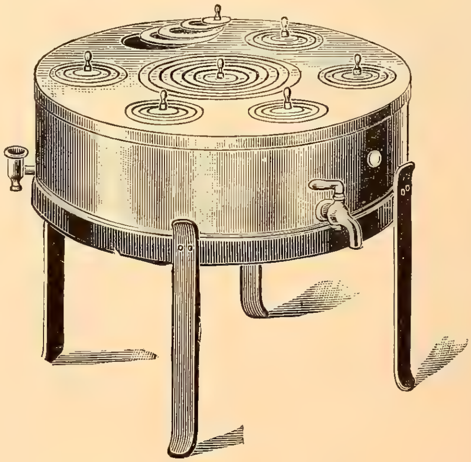
18995

18990 **Water Bath. Army Medical School Model.** Of copper; cylindrical, with offset bottom; height, 75 mm; diameter, 194 mm; holds 18 test tubes, with tubulation for thermometer and side tubulation for filling; diameter of perforations in top, 22 mm; diameter of perforations in removable false bottom, 12 mm; complete with tripod------Each 6.00

18995 **Water Bath—Tripod.** Of polished copper, tin lined, with concentric rings and water level regulator; diameter, 15 cm; depth, 10 cm; height of tripod, 23 cm------Each 8.00



19000

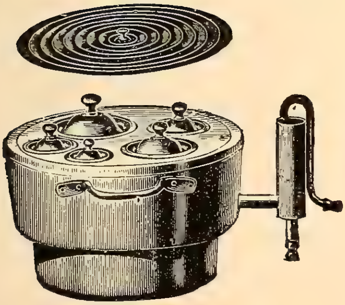


19005

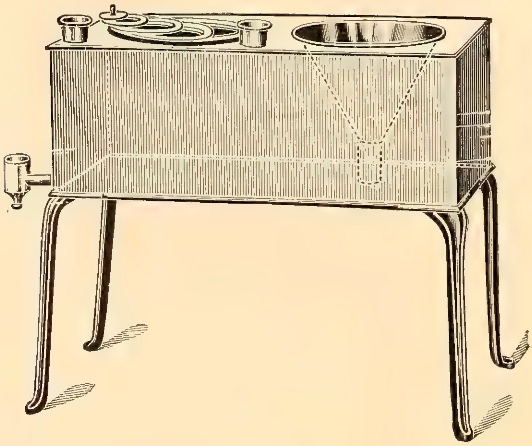
19000 **Water Baths—Funnel Form.** Furnished with constant water level and tripod.

No.	A	B
Diameter, in.	6	8
Each	**5.00**	**6.50**

19005 **Water Bath—Combination.** Low, circular form; made of heavy copper, on heavy iron removable base; has six small openings, each 80 mm in diameter, and one large opening in center, 150 mm in diameter; all openings provided with copper concentric rings; height, 100 mm; diameter, 400 mm ------Each 24.00



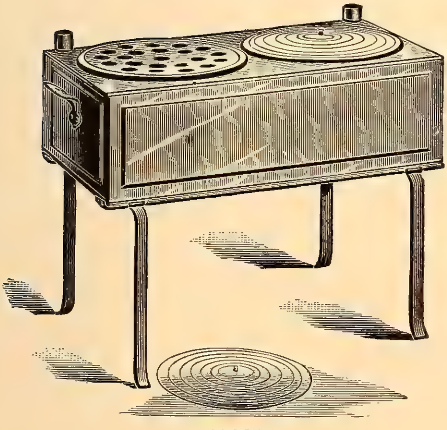
19010



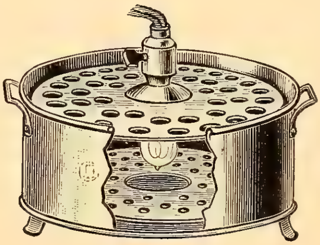
19015

19010 **Water Bath—Hoffmann's.** Of heavy polished copper with a top diameter of 20 cm and total height of 13 cm; supplied with set of concentric copper rings and cover, also a plate with five openings of different sizes, each with cover; provided with constant water level and handles --Each 16.00

19015 **Water Bath—Griffin's.** For hot filtration and evaporation; has constant water level and is constructed with copper funnel as well as four concentric rings and cover; made of tin lined copper and rests on four detachable legs; sheet-iron false bottom prevents its burning out; opening is 125 mm in diameter; outside dimensions: length, 33 cm; width, 18 in.; depth, 13 cm; with no accessories--------Each 12.50



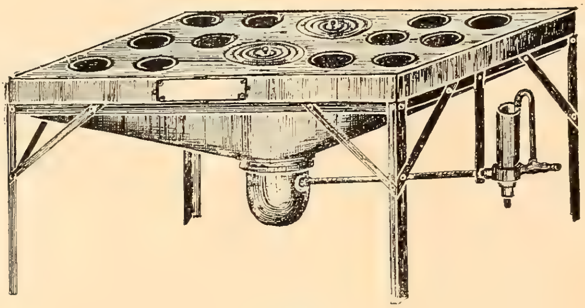
19020



19025

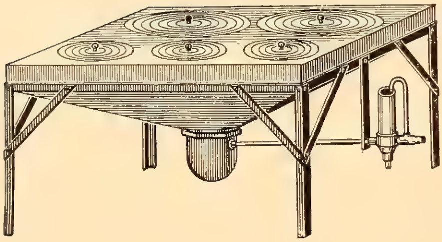
19020 **Water Bath—Combination, Mabon's.** Constructed of copper, tin lined and is rectangular in form; mounted on an iron frame 20 cm high enclosed in sheet-iron base; false bottom protects bath from the flame; has two openings, each with five concentric rings giving openings from 25 to 150 mm in diameter; furnished with plate having 22 holes for medium sized test tubes; with no accessories; outside dimensions: length, 38 cm; width, 18 cm; depth, 13 cm----------Each 21.00

19025 **Water Bath—Whipple's.** Provides a ready means for melting gelatine in tubes; made of heavy copper, tinned inside, and provided with a 48-tube rack having ¾-inch openings; water in bath is kept heated to required temperature for quickly melting gelatine by means of an electric lamp; inside dimensions: diameter, 31 cm; depth, 13 cm --Each 17.50

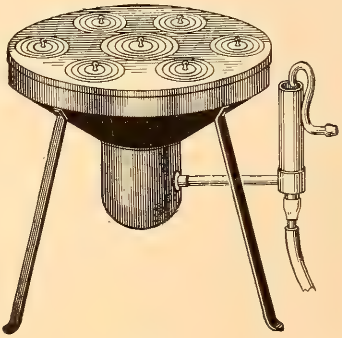


19030

19030 **Water Bath—Wiley's.** Made of heavy copper, supported on a braced stand of one inch angle iron; top is supported on under side by triangular strips of copper to prevent sagging; supplied with collar that fits over the heavy copper cup, and when connected to the threaded rings makes a tight joint; top measures 25 x 14½ inches; furnished complete with copper concentric rings……Each 72.00



19035



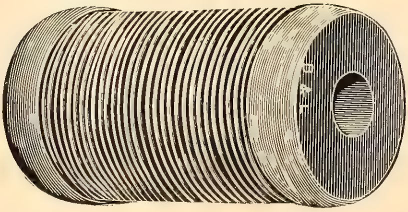
19040

19035 **Water Bath—Wiley's.** Small size; constructed in similar form to No. 19030 above, featuring economy of time and gas with rapid heating qualities; top dimensions, 14 x 12½ inches; fitted with brass ring used to hold the removable copper water cup; furnished complete with copper concentric rings……Each 54.00

19040 **Water Bath—Wiley's, Round.** Of heavy copper, mounted on iron stand and lined with heavy asbestos; top has one hole 3½ inches and six 2½ inches in diameter, each fitted with concentric copper rings; copper cup holding the water is provided with constant water level and is easily removed if it becomes burnt out; especially recommended for evaporation of specimens such as milk in analysis……Each 31.50

19042 **Water Baths, Agateware.** Heavy enameled steel with flange for tripod and fitted with copper concentric rings and handles.

No.	A	B
Diameter, mm	200	250
Each	2.50	3.50



19045 Wire—Brass.

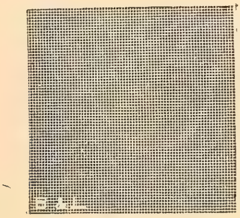
No.	A	B	C	D	E	F	G	H	I	J	K
Gauge, B. & S.	16	18	20	22	24	26	28	30	32	34	36
¼ lb. spools, per spool	.35	.35	.35	.35	.40	.42	.50	.60	.72	.95	1.50

19050 Wire—Copper.

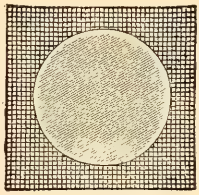
No.	A	B	C	D	E	F	G	H	I	J	K
Gauge, B. & S.	16	18	20	22	24	26	28	30	32	34	36
¼ lb. spools, per spool	.30	.30	.30	.33	.35	.38	.50	.60	.70	.90	1.40

19055 Wire—Nickel -- Per oz. .35
Per lb. 4.00

Wire—Platinum. See page 373.



19070



19075

19060 Wire Gauze—Copper. For combustion.

No.	A	B	C	D	E
Mesh	20	40	60	80	100
Per square foot	.80	1.00	1.10	1.20	1.80

19065 Wire Gauze—Iron.

No.	A	B	C	D	E	F	G	H
Mesh	6	10	14	16	20	30	40	50
Per square foot	.35	.40	.40	.45	.45	.50	.75	.90

19070 Wire Gauze—Iron. In squares; for supporting dishes, etc.

No.	A	B	C	D	E	F
Size, mm	75	100	125	150	175	200
Each	.05	.06	.09	.12	.15	.18

19075 Wire Gauze—Iron. In squares; with asbestos center; for supporting dishes, etc.

No.	A	B	C
Size, mm	100	120	150
Each	.14	.15	.18

19080 Wire Gauze—Nichrome. 16 mesh of No. 24 wire.

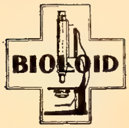
No.	A	B	C
Size, in.	4 x 4	5 x 5	6 x 6
Each	.45	.65	.95

Per square foot 3.50

19085 Wire Gauze—Nichrome. 20 mesh of No. 27 wire.

No.	A	B	C
Size, in.	4 x 4	5 x 5	6 x 6
Each	.60	.90	1.30

Per square foot 5.00


BIOLOID

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BIOLOID

STAINING METHODS

The purpose of the following matter is to afford the users of our stains a set of brief and explicit directions for their use. No effort has been made to cover all of the solutions which have been devised, nor are the materials the only ones that we supply. Our line is complete and we are able to supply all materials which may be required.

The information contained herein has been taken from a large number of sources, but principally from those important works, "Pathological Technique," by Mallory and Wright; "Clinical Diagnosis," by Simon; "Essentials of Laboratory Diagnosis," by Faught; "Physiological Histology," by Mann; and "Histology," by Bohm, Davidoff, Huber. We would urge those interested in a wide variety of staining methods to include these volumes in their library and we shall be pleased to give quotations.

It is hoped that the directions thus presented will be of some service to those interested in staining methods.

The Will Corporation

BIOLOID

CLASSIFICATION

For convenience the following arrangement has been made:

A. HISTOLOGICAL

1. GENERAL

- a. Sections (Protoplasm and Nuclei)
- b. Blood Smears (Histological)

2. SPECIAL

- a. Sections and Tissue Fibers
  (Elements other than Nuclei)
- b. Blood Smears
  (Differentiation of Elements)

B. BACTERIOLOGICAL

1. GENERAL

- a. Bacteria Preparations

2. SPECIAL

- a. Morphological Characteristics
- b. Specific Organisms

A. HISTOLOGICAL

1. GENERAL

a. Sections (Protoplasm and Nuclei)

Among Stains used in the treatment of sections for simple delineation of elements are the following:

Borax Carmine
Para Carmine
Haematoxylin, Boehmer's
Haematoxylin, Ehrlich's
Hemalum, Mayer's
Acid Hemalum
Iron Haematoxylin, Haidenhain's

In order to obtain differentiation of elements, double and multiple staining is resorted to. These solutions are used:

Haematoxylin Delafield's and Eosin
Picro Carmine, Ranvier's
Picro Carmine, Weigert's
Triple Stain, Biondi-Ehrlich-Haidenhain

The haematoxylin-eosin method is most generally used and is therefore described.

Delafield's Haematoxylin-Eosin Method

1. Sections, after removal of embedding substance, fixed to slide, are placed in Delafield's haematoxylin-Bioloid for 15-30 minutes.

2. Wash in tap water (if this is not alkaline—treat after washing in very dilute alkaline bath).

3. Treat successively in alcohol and water mixtures to 70 per cent alcohol.

4. Stain 1-2 minutes in alcoholic solution eosin-Bioloid.

5. Treat successively in alcohol and water mixtures to absolute alcohol, then absolute alcohol and xylol and finally xylol.

6. Mount wth balsam.

All excess of haematoxylin must be washed out before eosin is used. Cytoplasm is colored red, nuclear material, blue.

b. Blood Smears (Histological)

Delafield's Haematoxylin and Eosin method is sometimes used, but quicker results are obtained, and the technique is simplified, by the use of special blood stains. The application is simple, inasmuch as smears are fixed and dehydrated usually by the use of methyl alcohol, the specimen is then flooded with the stain, washed, dried and examined in balsam. Excellent differentiation is obtained by the use of Romanowsky's Stain. Wright's Stain and other Romanowsky modifications have the added advantage that fixing and staining are accomplished at the same time. Their use is found described under Special Stains for Blood Smears.

Other methods useful in blood examination are Ehrlich's Triacid, Skelton's Method, William's Invariable Method, McNeal's Method and McJunkin's Method. These methods are described under Special Stains for Blood Smears, since these too have special application.

2. SPECIAL

a. Sections and Tissue Fibers (Elements other than Nuclei)

MITOCHONDRIA

Acetic-osmic Bichromate Fixation Bensley

1. Fix very thin sections of perfectly fresh tissue (1 mm. thick) for twenty-four hours in osmic-bichrom solution Bioloid.

2. Wash in distilled water for one hour.

3. Dehydrate in graded alcohols, 50, 70, 95 and 100 per cent, twenty-four hours each.

4. Embed in paraffin.

5. Cut sections not over 4 microns thick and attach them to the slide by the albumin-water method.

6. Pass sections through toluol or xylol and graded alcohols to water.

7. One per cent solution of permanganate of potassium for thirty to sixty seconds.

8. Five per cent solution of oxalic acid for thirty to sixty seconds.

9. Wash thoroughly in water.

10. Stain for six minutes at 60 degrees C. in Altmann's aniline acid fuchsin solution Bioloid.

11. Rinse in distilled water.

12. Differentiate by dipping for an instant in a 1 per cent aqueous solution of methyl green Bioloid.

13. Drain and dehydrate directly and quickly in absolute alcohol.

14. Clear in toluol or xylol and mount in balsam. The mitochondria are stained intensely red, the nuclei, green.

We solicit your suggestions or comments on the notes offered in these pages.

MAST-CELLS

The cytoplasmic granules stain intensely, like bacteria with the basic aniline dyes, especially after fixation in alcohol or formaldehyde. In tissue preserved in Zenker's fluid they usually do not stand out prominently. In eosin-methylene-blue preparations they appear like poorly stained eosinophiles. Several methods of staining the granules are given. With Unna's stains for plasma-cells a differential color-stain is obtained for the granules of the mast-cells.

Ehrlich's Method

General Stain.—Harden in alcohol.

1. Stain with a saturated aqueous solution of dahlia Bioloid.
2. Wash out with acidified water.
3. Dehydrate in 95 per cent alcohol, absolute alcohol, xylol, xylol balsam Bioloid.

Specific Stain.—Only the cytoplasmic granules are stained. Harden in alcohol.

1. Stain twelve hours in dahlia-aceto-alcohol Bioloid.
2. Wash out in 95 per cent alcohol, absolute alcohol, xylol, xylol balsam Bioloid.

Ehrlich-Westphal Method

Harden at least a week in alcohol.

1. Stain twenty-four hours in alum-carmine-dahlia Bioloid.
2. Decolorize for twenty-four hours in absolute alcohol.
3. Xylol, xylol balsam Bioloid.

Nuclei red; granules blue.

Unna's Method

Harden in alcohol.

1. Stain in polychrome methylene-blue solution Bioloid one-quarter of an hour.
2. Wash in water.
3. Decolorize in glycerin-ether mixture Bioloid for five to ten minutes.
4. Wash a long time in water.
5. Absolute alcohol, xylol, xylol balsam Bioloid.

Nuclei blue; cytoplasmic granules of mast-cells red.

PLASMA-CELLS

Unna's Method

Cytoplasm stains quite deeply in alkaline methylene-blue solutions. The eosin-methylene-blue stain after fixation in Zenker's fluid brings them out very sharply. The method best suited for their demonstration furnishes at the same time a differential color-stain for mast-cells. (See Plasma-Cells and Mast-Cells.)

1. Stain in polychrome methylene-blue solution Bioloid, one-quarter of an hour.
2. Wash in water.
3. Decolorize in glycerine-ether mixture Bioloid for five to ten minutes.
4. Wash a long time in water.
5. Absolute alcohol, xylol, xylol balsam Bioloid.

PLASMA-CELLS AND MAST-CELLS

Unna's Method

Cytoplasm stains quite deeply in alkaline methylene-blue solutions. The eosin-methylene-blue stain after fixation in Zenker's fluid brings them out very sharply. The two methods best suited for their demonstration furnish at the same time a differential color-stain for mast-cells. The granules of the latter are stained red, the plasma-cells are stained blue.

Harden tissues in absolute alcohol.

Method A

1. Stain paraffin sections in polychrome methylene-blue Bioloid one-quarter of an hour to over-night.
2. Decolorize in a small dish of water, to which are added a few drops of glycerin-ether mixture Bioloid.
3. Wash thoroughly in water.
4. Absolute alcohol, xylol, xylol balsam Bioloid.

Method B.

1. Stain in polychrome methylene-blue solution Bioloid five to fifteen minutes.
2. Wash in water.
3. Decolorize and dehydrate in a one-fourth per cent alcoholic solution of neutral orcein Bioloid (about fifteen minutes).
4. Absolute alcohol, xylol, xylol balsam Bioloid.

Methyl-Green-Pyronin Method (Unna-Pappenheim)

1. Fix in alcohol.
2. Stain five to ten minutes in incubator.
3. Wash in cold water.
4. Differentiate and dehydrate quickly in absolute alcohol.
5. Clear in xylol, and mount in xylol balsam.

Acetone can be used to advantage in place of alcohol to dehydrate, because it has less tendency to extract the pyronin from the cytoplasm of the cells.

THE COLLAGEN FIBRILS AND RETICULUM OF CONNECTIVE TISSUE

Several methods are available for the demonstration of collagen fibrils and reticulum. The simplest is by means of Van Gieson's picric acid and acid-fuchsin solution, but it is applicable to the coarser fibers only. The stain with aniline blue is believed to be better than any yet proposed, but is limited to tissues hardened in Zenker's fluid.

Mallory's Aniline Blue Method

The following method is not absolutely differential because, besides collagen fibrils and reticulum, it also stains certain hyaline substances, but these latter are usually so different morphologically that confusion cannot arise. The method is also useful for the study of fibrin, fibroglia fibrils, smooth and striated muscle fibers, and amyloid.

1. Fix in Zenker's fluid Bioloid.

2. Embed in Bioloidin or paraffin.

3. Stain sections in a 0.5 per cent aqueous solution of acid fuchsin for five minutes or longer, depending on the freshness of the tissue.

4. Transfer directly to the following solution and stain from ten to twenty minutes or longer in Mallory's aniline blue Bioloid.

5. Wash and dehydrate in several changes of 95 per cent alcohol.

6. Clear in xylol Bioloid.

7. Xylol balsam Bioloid.

For Bioloidin sections use 95 per cent alcohol and clear by the xylol blotting-paper method.

The collagen fibrils and reticulum of connective tissue, amyloid, mucus, and certain other hyaline substances stain blue; nuclei, cytoplasm, fibroglia fibrils, axiscylinders, neuroglia-fibers, and fibrin, red; red blood-corpuscles and myelin sheaths, yellow; elastic fibers, pale pink or yellow. The various structures do not stain with equal intensity, so that certain ones are brought out with great sharpness. This is particularly true of the collagen fibrils and reticulum of connective tissues, and of fibrin and smooth and striated muscle fibers.

If it is desired to bring out the collagen fibrils as sharply as possible, omit the staining with acid-fuchsin. Then the nuclei and protoplasm stain yellow, and the blue fibrillae and reticulum stand out more prominently.

Van Gieson's Method

1. Harden in chrome salts or in corrosive sublimate. The results after alcohol are not so good.

2. Stain deeply in alum-hematoxylin Bioloid.

3. Wash in water.

4. Stain for three to five minutes in Van Gieson's stain Bioloid.

5. Dehydrate in 95 per cent alcohol.

6. Oleum origani cretici Bioloid.

7. Xylol balsam Bioloid.

Unna's Orcein Method

1. Harden in alcohol.

2. Stain in the concentrated solution of Unna's polychrome-methylene- blue Bioloid five minutes.

3. Wash in water.

4. Decolorize, differentiate, and stain in a 1 per cent solution of orcein Bioloid fifteen minutes.

5. Wash in absolute alcohol.

6. Xylol.

7. Balsam Bioloid.

Nuclei, dark blue; cytoplasm, pale blue; elastic and connective-tissue fibers, deep orcein red; smooth muscle fibers, bluish; mast cell granules, red; cytoplasm of plasma-cells, deep blue.

ELASTIC FIBRES

Weigert's Method

Fixation in alcohol or formaldehyde is preferable, but other fixing reagents give good results. Embed in Bioloidin or paraffin. After fixation in Zenker's fluid, stain sections slowly to diffuse coloring of the collagen fibrils.

1. Stain sections twenty minutes to one hour in resorcin-fuchsin solution Bioloid.
2. Wash off in alcohol.
3. Blot with filter-paper, and add xylol quickly; repeat the blotting, followed by xylol, two or three times until the section is perfectly cleared.
4. Xylol balsam Bioloid.

Sections can be stained for several hours. If the rest of the tissue is overstained, differentiate in acid alcohol Bioloid; if the sections are too deeply stained, the color cannot be washed out. Diffuse staining can be avoided by diluting the stain either with alcohol or, better still, with alcohol containing 2 per cent of hydrochloric acid. The elastic fibers appear dark blue, almost black, on a clear background. The nuclei can be stained red with carmine before or after the staining of the fibers. After Zenker fixation, carmine stains are difficult to obtain. A light nuclear stain with alum-hematoxylin, after the fibrils have been colored, is preferable.

If it be desired to keep sections for some time before mounting, wash them in alcohol and place in water.

Unna's Orcein Method

Unna's latest method of using orcein is as follows:

1. Stain sections in orcein 1 per cent solution Bioloid.

Place the sections in a dish and pour over them enough of the solution to cover them. Warm gently in an incubator or over a small flame for ten to fifteen minutes until the solution thickens, or leave in the soluton at room temperature over night.

2. Wash off thoroughly in dilute alcohol (70 per cent).
3. Wash in water to get rid of all the acid and to fix the color.
4. Alcohol.
5. Clearing oil Bioloid.
6. Balsam Bioloid.

The washing in water is not absolutely essential.

Elastic fibers are stained of a deep silky-brown color, connective tissue, a pale brown. If it is desirable to have only the elastic fibers stained, wash for a few seconds in 1 per cent hydrochloric-acid alcohol before washing in water. The nuclei can be brought out by straining in Unna's polychrome methylene-blue solution Bioloid after washing the sections in water.

MUCIN

Hoyer's Thionin Method

1. Harden in corrosive sublimate, followed by alcohol.
2. Paraffin sections are passed through xylol, chloroform, and 95 per cent alcohol to free them from paraffin, and are then placed in a 5 per cent aqueous solution of corrosive sublimate for three to five minutes.
3. Stain in a dilute solution of thionin-Bioloid for ten to fifteen minutes.
4. Alcohol.
5. Clear in a mixture of oils of cloves and thyme.
6. Turpentine oil or oil of cedar.
7. Balsam Bioloid.

Before the staining the sections must not be treated with iodine solution to remove mercury precipitate, because this clouds the staining.

Mucin, red; everything else, blue.

Unna's Polychrome Methylene-blue Method

1. Fix in alcohol. Stain paraffin or Bioloidin sections in polychrome methylene-blue Bioloid five to ten minutes or longer.
2. Wash in acidulated water.
3. Fix in 10 per cent solution of bichromate of potassium half a minute.
4. Wash in water.
5. Dry on slide with filter paper.
6. Decolorize in aniline plus 1 per cent hydrochloric acid (a few seconds only).
7. Wash off with oil of bergamot.
8. Balsam Bioloid.

Nuclei, blue; mucin, cartilage, and amyloid, red.

HYALINE AND COLLOID MATERIALS

Unna's Method

Harden in alcohol.

1. Acide fuchsin Bioloid (2 per cent aqueous solution).
2. Saturated aqueous solution of picric acid two minutes.
3. Saturated alcoholic solution of picric acid two minutes.
4. Wash off in alcohol.
5. Clearing oil, balsam Bioloid.

Hyaline and connective-tissue fibers, red; colloid of thyroid gland, yellow; protoplasm, yellow.

To show acidophilic and basophilic hyaline:

1. Water blue (2 per cent aqueous Bioloid) twenty to thirty seconds.
2. Water.
3. Carbol fuchsin Bioloid one to two minutes.
4. Water.
5. Alcohol slightly tinged with iodin.
6. Pure alcohol.
7. Clearing oil, balsam Bioloid.

Nuclei, keratin, and large hyaline masses, cherry red; connective-tissue fibrillae, protoplasm, and small hyaline bodies, blue.

GLYCOGEN

Lubarsch's Gentian-Violet Method

Alcohol fixation; paraffin embedding.

1. Stain with Mayer's alcoholic carmine Bioloid, differentiate in acid alcohol, wash off in absolute alcohol.
2. Stain in aniline oil gentian-violet Bioloid for one to two minutes, warming slightly if necessary.
3. Wash quickly in water.
4. Gram's solution Bioloid on section continuously for five to ten seconds.
5. Dry thoroughly with filter-paper.
6. Dehydrate and differentiate in aniline-oil xylol (2 to 1) or in pure aniline oil.
7. Wash thoroughly in xylol and mount in balsam Bioloid.

Nuclei, red; glycogen, dark blue to violet. It is advisable to expose the sections to daylight for one to two days. The preparations will keep up to one year.

AMYLOID

Iodin Reaction for Amyloid

1. Stain sections in a weak solution of iodin (Lugol's solution Bioloid diluted until of a clear yellow color) for three minutes.

2. Wash in water.

3. Mount and examine in water or glycerin.

If the tissue reacts strongly alkaline, a condition which may result from postmortem decomposition, the color reaction with iodin will not take place. In such cases the tissue or the sections of it should be treated with dilute acetic acid before applying the test. The normal reaction of amyloid with iodin may be increased by treating the section after staining with dilute acetic acid.

Langhans' Method for Obtaining Permanent Mounts with Iodin

1. Harden in alcohol and stain in Mayer's alcoholic carmine Bioloid.

2. Stain sections in Lugol's Bioloid five to ten minutes.

3. Dehydrate quickly in 1 part of tincture of iodin to 3 or 4 parts of absolute alcohol.

4. Clear and mount in oleum origani cretici Bioloid.

The color is said to keep remarkably well. Other oils or balsam cause it to fade quickly. The staining in Lugol's solution may be omitted, as the tincture of iodin usually stains the amyloid sufficiently deep.

WRIGHT'S STAIN BIOLOID

BIOLOID

Wright's Stain is without question the most popular and dependable of the Romanowsky stains. As prepared by us it gives excellent differentiation and a perfect blood picture.

b. *Blood Smears

(Differentiation of Elements)

The method of Romanowsky has long been used with success. Staining is accomplished by an eosinate of methylene blue. Two solutions are required and smears must first be fixed. To obviate this modifications have been introduced and the later methods, particularly Wright's, are very popular. Fixation is accomplished by alcohol which holds the stain in one solution. The Romanowsky method and the modifications are here given.

Romanowsky's Method

The cover-glass specimen must be fixed by immersion in alcohol and ether, or preferably by heating for not less than thirty minutes, at from 105° to 110° C.

The staining mixture is prepared from the two stock solutions just before using.

1. Add one part of Romanowsky stain, No. 1 ,Bioloid, to two parts Romanowsky stain, No. 2, Bioloid. Stir carefully with a glass rod, do not filter, and pour into a watch glass.

2. Float the cover-glass preparation upon the top of this fluid with the blood surface downward.

3. Cover the specimens with another inverted glass and cover the watch-glass with the inverted cylinder moistened on the inside.

4. A good staining is obtained in from one-half to three hours.

5. Rinse in water.

6. Dry and examine as usual.

The various elements of the blood exhibit the differential staining described under the modifications of this stain.

Nocht's Method

The advantage of this method is that much older specimens can be successfully stained than with the original Romanowsky formula.

Cover-glass specimens are the best to use and they should be fixed either by heat or by immersion in alcohol and ether.

The staining fluid must be prepared from the two stock solutions immediately before using.

1. To 20 cc of water add 4 drops of Nocht stain No. 1 Bioloid and 6 to 8 drops of Nocht stain No. 2 Bioloid. Stir, do not filter, and pour into a concave watch-glass.

2. Float the specimens, blood side down, on the mixture to avoid the deposit of the precipitate which always forms.

3. Allow to remain from 7 to 10 minutes.

4. Wash with water.

5. Examine under the microscope, mounting in water, to determine whether the staining is as intense as desired. If not, the process may be repeated. If the nuclei of the large mononuclear leucocytes are stained dark red, it will generally hold true that the parasites are also properly stained.

6. When the staining is complete, dry the preparation in air and mount in neutral balsam. A slight alkalinity of the balsam is not objectionable but it must be free from acid to avoid losing the characteristic color.

With very old specimens it is necessary to place them in alcohol for some time, wash them thoroughly in water and stain for a long period, in some cases twenty-four hours. If after a long staining the red cells appear dark blue or bluish red, the specimen may be dipped into alcohol for a second or two to extract some of the dye, after which it must be washed before further procedure.

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*For the making of blood smears see Mallory & Wright "Pathological Technique."

ROMANOWSKY MODIFICATIONS

Hasting's Method

Previous fixation of the blood is unnecessary.

1. Cover the smear with Hasting's stain Bioloid and allow to stand for one minute.

2. Add water to the stain on the smear until a greenish, metallic looking scum appears on the surface.

3. Allow this to remain for five minutes.

4. Wash for two or three seconds in water.

5. Dry immediately between filter paper.

A better staining of the more mature forms of the malarial parasite is obtained by staining for two minutes and differentiating for ten.

Any stain on the negative side of the cover-glass should be removed, otherwise the greenish coating which forms will interfere with observation.

In a properly stained preparation the red cells are stained red, but if the specimen is over stained or old the cells may appear light gray or blue. Degeneration is well shown. The nuclei of lymphocytes, large mononuclear leucocytes and myelocytes are magenta red, while the nuclei of the polynuclear leucocytes are a bluish violet. Neutrophilic granules are bright red, eosinophilic granules, eosin colored and the mast cell granules, dark red. Blood plates are pale blue with red nuclei, while the nuclei of red blood corpuscles are red. Malarial organisms appear with a blue body having intensely red nuclear structures.

Jenner's Method

Previous fixation of the blood is unnecessary.

1. Cover the smear with Jenner's stain Bioloid and allow to stand for one minute.

2. Add water to the stain on the smear until a greenish, metallic looking scum appears on the surface.

3. Allow this to remain for five minutes.

4. Wash for two or three seconds in water.

5. Dry immediately between filter paper.

A better staining of the more mature forms of the malarial parasite is obtained by staining for two minutes and differentiating for ten.

Any stain on the negative side of the cover-glass should be removed, otherwise the greenish coating which forms will interfere with observation.

Malarial organisms are stained blue, red blood corpuscles, a grayish terra cotta; and the nucleated red cells, blue. The nuclei of leucocytes are also stained blue; the plaques, mauve; the neutrophilic granules, a purplish red; and mast-cell granules, dark violet. Eosinophilic granules are stained bright red. Granular degeneration and polychromasia of red cells is well brought out.

Leishman's Method

No fixation of the blood smear is required.

1. Cover the blood film with Leishman's stain Bioloid for about one-half minute. The amount of stain used must be noted.

2. To the stain on the preparation add twice its volume of distilled water. The quantity of the diluted fluid should not be so great that any runs off. Allow the diluted stain to remain five to ten minutes.

3. Wash with distilled water.

4. Add a few drops of water and allow it to remain on the film for a minute. This step is important.

5. Dry without heat and examine as usual.

A well stained specimen shows the nuclei of nucleated red cells almost black with the extra-nuclear portion gray. Red blood corpuscles are pinkinsh or greenish, the nuclei of leucocytes are ruby red, blood plates, a deep ruby red with uneven margins and often exhibiting a light blue zone surrounding the red center. Malarial parasites stain blue with ruby red chromatin.

Wilson's Method

This is a modification belonging to the Romanowsky group of blood stains. It is used in the same manner as is Wright's and gives, in general, the same staining to the various elements of the blood.

Wright's Method

Wright's stain is a modification of the one devised by Leishman and combines the advantages of the differential Romanowsky stain with the results obtained with Ehrlich's. Wright's stain is particularly well suited for work with the malarial parasites, staining the body blue and the chromatin from a lilac through the varying shades of red to nearly black, depending upon the age of the parasite. The chromatin in the young forms appears as a very dark red body.

1. Flood the film of blood with a noted quantity of Wright's stain Bioloid (8-12 drops).

2. After one minute add to the stain on the film the same quantity of distilled water and allow it to remain for two or three minutes, according to the intensity of the staining desired. A longer period may produce a precipitate. Eosinophilic granules are best brought out by a short period of staining. The quantity of diluted fluid on the preparation should not be so large that some of it runs off.

3. Wash in water, preferably distilled, for 30 seconds or until the thinner portions of the film become yellow or pink. This differentiation may be done under a low power objective, placing the film, blood side up, on a slide.

4. Dry and mount in balsam Bioloid.

Films more than a few hours old do not stain as well as fresh ones. The bottle of stain must be well stoppered when not in use to avoid precipitation, which results upon evaporation and hence concentration of the staining fluid.

Blood films stained with Wright's stain Bioloid show the following differentiations: the red cells are orange or pink with any degeneration well brought out. Nucleated red cells have blue nuclei with the cytoplasm of a bluish tint. Lymphocytes have dark purplish-blue nuclei and robins-egg-blue cytoplasm which may contain a few dark blue granules. The polynuclear neutrophilic leucocytes have dark or lilac nuclei and granules of a reddish lilac color. The eosinophilic leucocytes have blue or lilac nuclei; granules are the color of eosin and the cytoplasm, blue. Large mononuclear leucocytes have blue or lilac nuclei while the cytoplasm may be pale blue in one form and blue with dark granules in another form. Mast-cells have irregular shaped nuclei stained purplish or dark blue and with cytoplasm, sometimes bluish, in which coarse spherical granules are present in varying sizes. Myelocytes have darkly stained nuclei with blue cytoplasm in which numerous dark or reddish-lilac granules are embedded. Blood-platelets appear as round or oval blue bodies with nearly smooth margins containing many small violet or purplish granules.

OTHER METHODS

Ehrlich's Triacid Method

This is a very useful blood stain in which orange G, acid fuchsin and methyl green are in solution. The stain is said to sometimes vary in its action and for this no reason so far has been assigned.

1. Prepare cover-glass smears and allow them to dry in the air.
2. Cover the preparation with Ehrlich's triacid solution and allow it to remain from six to eight minutes.
3. Wash well with water.
4. Dry and mount for examination.

Red corpuscles are stained a copper color while the nuclei of nucleated red corpuscles are given an intense blue. The nuclei of lymphocytes appear deep blue, the nuclei of large mononuclear cells, a pale blue and those of neutrophilic and eosinophilic cells are a greenish blue. Eosinophilic granules are stained bright red while the neutrophilic granules are violet.

Skelton's Method.

This stain consists of an eosin and a methylene blue solution which are kept separate. The blood spread or smear is best made on a cover glass and is allowed to dry in the air.

1. Apply all of the Skelton's eosin solution Bioloid that will lie on the cover glass.
2. Allow this to remain for one and a half minutes.
3. Pour off the stain but do not wash nor allow to dry.
4. Immediately cover the smear with as much of the Skelton's methylene blue solution Bioloid as will lie on the cover glass.
5. Allow this to remain for from one to one and a half minutes.
6. Pour off the stain and wash the preparation by dipping it up and down in water ten or twelve times.
7. Dry between filter paper and mount for examination.

Different effects may be obtained by varying the time of staining. This stain is very reliable and in stoppered bottles keeps indefinitely.

Williams' Invariable Method

A stain especially suited to the needs of the practitioner who cannot become proficient in technique. The precise nature of anemias, leukemias and leukocytoses may be determined and eosinophilia in parasitic diseases and basophilic alterations may be demonstrated with this stain. Nuclear figures are well stained indeed.

1. Fix the specimen by burning off with absolute alcohol.
2. Cool and immerse in Williams' invariable stain Bioloid for fifteen minutes.
3. Wash in tap water; dry and mount.

The fixation by burning is done by covering the slide or cover glass preparation with absolute alcohol, then shaking off the excess and igniting the remainder in a flame previously lit. The alcohol will flash off promptly and leave a dry, fixed film.

McNeal's Method

1. Cover the dried blood film with McNeal's stain Bioloid.
2. Let stand one minute and dilute with equal quantity of distilled water.
3. After 2-3 minutes wash in distilled water till proper differentiation is obtained.
4. Dry between filter paper and examine in balsam-Bioloid.

Blood film must be fresh. Use distilled water only.

McJunkin's Method

1. Place smear on cover-glass.
2. Hold with forceps and place two drops of McJunkin's blood stain-Bioloid on dried film.
3. After one-half minute add 3-4 drops distilled water.
4. After 2-3 minutes carefully float off stain.
5. Wash with distilled water to remove excess of blue.

The red blood corpuscles stain an orange. The leucocytes are well differentiated. The nuclei of all the white cells are red. The cytoplasm of the lymphoblastic cells is a robin's egg blue and free from granules (unless the preparation is overstained); that of the endothelial leucocytes has a trace of blue and a number of reddish-staining granules, while the cytoplasmic part of the neutrophiles has no blue and is thickly studded with the neutrophilic granules.

BLOOD STAINS WITH SPECIAL APPLICATION

LEUCOCYTIC GRANULES

McJunkin's Benzidin-Polychrome Method

1. On a 22 mm. cover glass (No. 1) place 4 drops of benzidin Bioloid reagent (Benzidin-Bioloid 100 mgm. and 25 cc. 80% Synthol, or other anhydrous, C. P. methyl alcohol) and one drop hydrogen dioxid, for 30 seconds.
2. Dilute with 8 drops distilled water and allow to act for four minutes.
3. Wash with distilled water and blot between filter paper.
4. Add four drops distilled water and four drops Wright's Stain-Bioloid and allow to act four minutes.
5. Wash, blot, air-dry and mount in balsam-Bioloid.

All solutions are dropped from similar bottles with or without a snout-leak, and not from pipets. The benzidin solution keeps for several weeks. The depth of the granule stain is much increased by diluting the benzidin reagent with a phosphate solution having a hydrogen-ion concentration of P_H 6.4 instead of with distilled water. The phosphate solution is also used for diluting the Wright stain. In using the phosphate solution it is necessary to place two drops of the benzidin reagent on the cover glass for thirty seconds, dilute with 10 drops of the phosphate solution, and allow the dilution to act for only one minute. Since the amount of reactive substance in the leucocytes of guinea-pig blood is much less than that present in human blood, 8 drops of the phosphate solution are used to dilute 4 drops of the benzidin, and a reaction of time of four minutes is allowed in staining the blood of this animal. If the granules are colored too heavily, the structure of the neutrophiles and eosinophiles is obscured and the dilution with water (or phosphate solution) should be increased and the time shortened.

The granules of the neutrophiles, endothelial leucocytes, and eosinophiles stain dark brown, while all other blood elements are colored exactly as they are in a simple Wright's stain. The basophilic granules are a rich purple; the large eosinophilic granules are brown and have a ringlike appearance due to their refractive centers; the neutrophilic are dark brown, irregular in shape, and thickly set in the cytoplasm, while the robin's-egg blue of the lymphocytes is entirely non-granular except for the characteristic "azur" meta-chromatic granules of a bright reddish color present in some of them.

LYMPHOCYTES

Pappenheim's Method

1. Cover the smear with Pappenheim's stain Bioloid or float a cover-glass, blood side down, on the liquid.

2. Examine the preparation after washing in water and repeat the process until the desired depth of staining is obtained.

This is one of the solutions for basic double staining and is regarded by its author as especially specific for the lymphocytes, although it also stains young erythroblasts poor in haemoglobin in the same manner. The difference in the nuclei and the fact that the lymphocytes frequently show an uneven margin while the margin of the erythoblasts is smooth, makes it possible to distinguish between them. Basophilic protoplasm of the lymphocytes stains a dark carmine red. The protoplasm of all other cells either remains colorless or assumes a pale brownish or reddish yellow color.

NEUTROPHILIC MATERIAL

Ehrlich's Method

1. Preparations require but a slight degree of fixation.

2. Stain the preparations for from five to twenty minutes with Ehrlich's neutral solution Bioloid.

3. Wash in water.

4. Dry and examine as usual.

Red corpuscles assume the color of fuchsin, while their nuclei as well as those of leucocytes are black or lilac. Eosinophilic granules are red and the neutrophilic, violet.

OXYPHILIA

Ehrlich's Method.

1. Fix the specimens at 110°C for two hours.

2. Float blood side down on Ehrlich's tri-glycerine mixture-Bioloid for from 16 to 24 hours.

3. Wash in water and examine; after which, if the staining is not deep enough the process may be repeated.

4. Dry and examine as usual.

The red corpuscles are stained orange, the leucocytes are gray with dark nuclei and the eosinophilic a bright red unless the specimen has been too intensely fixed, whereupon they become orange in color.

CORPUSCLE ESTIMATION

Toisson's Diluting Solution

This solution is used as a diluting fluid when preparing blood for the estimation of the number of red corpuscles. It not only has no effect upon the form or color of the corpuscles but has the further advantage of staining the white corpuscles.

Solution must be filtered each time before using. It is used without dilution.

Turk's Diluting Solution

This solution is employed when preparing blood for counting the white corpuscles. The red corpuscles are destroyed by this solution while the leucocytes are stained violet. The solution is ready for use as supplied and is not to be diluted or filtered.

B. BACTERIOLOGICAL

1. GENERAL

a. Bacteria Preparations

2. SPECIAL

a. Morphological Characteristics

b. Specific Organisms

1. GENERAL

a. Bacteria Preparations

The methods of Gram, Ziehl-Nielsen, Koch-Ehrlich and Loeffler are advised for general bacterial staining. Since these have special application also, they are described under "Special Staining Methods for Specific Organisms."

Behavior of Pathogens Toward Gram's Stain

In the following table is shown the behavior of the more important pathogenic bacteria from actively growing cultures toward the method of Gram:

Stained by Gram's Method.	Decolorized by Gram's Method.
Staphylococcus pyogenes aureus.	Gonococcus.
Staphylococcus pyogenes albus.	Diplococcus intracellularis meningitidis.
Streptococcus pyogenes.	Typhoid bacillus.
Streptococcus capsulatus.	Bacillus coli communis.
Pneumococcus Bacillus scarlatinae.	Spirillum of Asiatic cholera.
Micrococcus tetragenus.	Bacillus pyocyaneus.
Bacillus diphtheriae.	Bacillus of influenza.
Bacillus tuberculosis.	Bacillus of glanders.
Bacillus of anthrax.	Bacillus proteus.
Bacillus of tetanus.	Bacillus mucosus capsulatus.
Bacillus aerogenes capsulatus.	Bacillus of dysentery.
Bacillus of malignant edema.	Bacillus of chancroid.
Bacillus of bubonic plague	

2. SPECIAL

a. Morphological Characteristics

FLAGELLA

Claudius' Method

1. Fix the cover-glass or slide preparation by heating in a drying oven or hot air sterilizer to 110 degrees C. in such a manner that this temperature is reached slowly in the course of half an hour. During the heating the preparation is to be enclosed in dry filter paper.

2. Cover the preparation with, or immerse it in, the following mixture for twenty to thirty minutes at room temperature:

1 per cent aqueous solution of chromic acid, 20cc.
Freshly prepared aniline water, 0.5 cc.
Glacial acetic acid, 10 drops.

The aniline water is prepared by shaking together for a few minutes one part of aniline oil and 25 parts of distilled water and filtering through wet filter paper.

3. Wash in water and dry in air.

4. Mount in balsam or cedar oil and examine with strong light and open condenser.

The method depends on the formation of aniline black in the mixture and the deposit of a bluish film on the preparation in which the flagella stand out uncolored.

Any film formed in the unchanged surface of the preparation may be removed with a towel wet with aniline oil.

SPORES

Spores take up the aniline dyes with difficulty, probably owing to their dense protective envelope. When once stained, however, they do not give up their color easily, and resist decolorizing agents. The cover-glass preparations should be thinly spread.

Abbott's Method

1. Stain the cover-gass preparation deeply with methylene-blue Bioloid, heating repeatedly until the staining solution boils, but do not boil continuously, during about one minute.
2. Wash in water.
3. Wash in 95 per cent alcohol containing 0.2 to 0.3 per cent hydrochloric acid.
4. Wash in water.
5. Stain for eight to ten seconds in aniline-fuchsin solution Bioloid.
6. Wash in water and mount.

The spores are stained blue and the bodies of the bacteria red.

Moeller's Method

1. Wash the cover-glass preparation in chloroform for two minutes.
2. Wash in water.
3. Treat with 5 per cent solution of chromic acid one-half to two minutes.
4. Wash in water.
5. Stain with carbol fuchsin-Bioloid, heating slowly until the fluid boils.
6. Decolorize well in a 5 per cent soluton of sulphuric acid.
7. Wash in water.
8. Stain in aqueous solution of methylene blue-Bioloid thirty seconds.

The spores will be red, the bodies of the bacteria, blue. The preliminary treatment with chloroform is to cleanse the preparation.

CAPSULES

Smith's Method

1. Make a thin cover-glass preparation from fresh sputum, or pneumonic, pleural, or pericardial exudate.
2. Pass through flame.
3. Cover with a 10 per cent aqueous solution of phosphomolybdic acid Bioloid four to five seconds.
4. Wash in water.

If the micro-organism is Gram-staining, like the pneumococcus or streptococcus capsulatus, proceed as follows:

5. Aniline oil methyl-violet, steaming one-quarter to one-half minute.
6. Wash in water.
7. Treat with Gram's iodine Bioloid, steaming one-quarter to one-half minute.
8. Decolorize with 95 per cent alcohol.
9. Wash in water.
10. Stain with a 6 per cent aqueous solution of eosin Bioloid one-half to one minute, warming gently.
11. Wash in water.
12. Wash in absolute alcohol.
13. Clear and mount in xylol Bioloid.

The capsule will be found to be distinct, clear cut, eosin-stained about the Gram-stained micro-organism.

If the micro-organism is Gram-decolorizing, after step 4 above proceed as follows:

5. Stain with a 6 per cent aqueous solution of eosin Bioloid one-half to one minute, warming gently.
6. Wash in water.
7. Counterstain with Loeffler's methylene blue Bioloid one-quarter to one-half minute, warming gently.
8. Wash in absolute alcohol.
9. Clear in xylol and mount in xylol balsam.

The capsule will appear eosin-stained about the blue-stained micro-organism.

Hiss's Method

1. Dry the smear preparation in the air and fix by passing two or three times through the flame.
2. Cover with a mixture of 5 cc. of saturated alcoholic solution of fuchsin or methyl-violet and 95 cc. of distilled water and warm until steam appears.
3. Wash off the mixture with 20 per cent aqueous solution of sulphate of copper.
4. Dry without washing in water.

The capsule is blue and the body of the bacterium purple.

Richard Muir's Method

1. The preparation is dried and stained in filtered carbol-fuchsin Bioloid for half a minute with gentle heat.
2. Wash slightly with methyl-alcohol and then well in water.
3. Place in Muir's mordant for a few seconds.
4. Wash well in water.
5. Treat with methyl-alcohol for about a minute. The preparation has a pale reddish appearance.
6. Wash well in water.
7. Counterstain with a watery solution of ordinary methylene-blue for half a minute.
8. Dehydrate in alcohol, clear in xylol, and mount in balsam.

The bacteria are stained a deep crimson and the capsules a blue tint. The capsules of bacteria in cultures may sometimes be demonstrated by this method.

b. Specific Organisms

These special methods of staining are said to be of great advantage in cases where only a few specific bacilli may be suspected to be present among a large number of other bacteria.

DIPHTHERIA BACILLI

Albert's Method

1. Smears are made on slides or cover-glasses in the usual manner.
2. Fix by heat.
3. Stain with Albert's stain Bioloid solution No. 1.
4. Drain off without washing.
5. Apply Albert's stain Bioloid solution No. 2 for one minute.
6. Wash briefly with water and dry with filter paper.
7. Mount in usual manner.

The granules of the diphtheria bacilli take a very dark green, almost black, color, standing out in marked contrast to other elements in the microscopic field. The bars of the bacilli appear dark green and the intermediate portions as well as other bacteria, a light green.

Hunt's Method

1. Stain in saturated aqueous solution of methylene-Bioloid one minute without heating.
2. Wash in water.
3. Cover with aqueous solution of tannic acid, 10 per cent, for ten seconds.
4. Wash in water.
5. Stain in saturated aqueous solution of methyl-orange one minute, without heating.
6. Wash in water.
7. Dry, and mount in balsam.

By this method the granules, etc., are dark blue or almost black, and stand out very sharly against the light green coloring of the body of the bacillus.

Mallory's Method

1. Stain smear preparations with Mallory's stain Bioloid 15 to 30 minutes.
2. Wash off with water and dry.

Overstaining does not occur. The polar bodies or granules are stained intensely. The body of the bacterium stains lightly. The solution cannot be recommended as a general stain for bacteria because it is not intense enough, unless structures similar to polar bodies are present.

Neisser's Method

1. Stain the smear with Neisser's methylene blue Bioloid three seconds.
2. Wash in water.
3. Stain for three to five seconds in bismarck brown Bioloid.
4. Wash in water and mount.

The diphtheria bacilli stained by this method appear as pale brown rods, bearing bluish-black granules, usually of oval shape and of a diameter somewhat greater than the rod. The majority of the bacilli show a granule at each end or at only one end, but not rarely three granules are present, one being near the middle of the rod.

The bacilli must have been grown on Loeffler's blood-serum medium, coagulated at 100 degrees C., and the culture must be at least nine hours and not more than twenty-four hours old.

GONOCOCCI

Gram's Method

For this method of staining three solutions are required, namely, aniline water gentian violet, iodine solution and Bismarck brown. This method of staining is considered one of the most accurate for distinguishing gonococci from other cocci. The method here given is a combination of Gram's method with an after-stain of Bismarck brown which may, of course, be omitted if desired, leaving gonococci decolorized.

1. Spread the pus thinly over a cover glass with a platinum loop but do not spread by means of two cover glasses.
2. Fix the preparation.
3. Stain for 30 seconds with aniline water gentian violet Bioloid, but use no heat.
4. Wash in water.
5. Decolorize by covering the specimen with iodine solution Bioloid for 30 seconds.
6. Wash in water.
7. Wash in 95 per cent alcohol until the color no longer comes out of the preparation.
8. Wash in water.
9. Stain in Bismarck brown Bioloid for 30 seconds.
10. Wash in water, dry and mount.

The gonococci are stained brown, while a blue-black color is imparted to other pyogenic cocci.

Gram's Method—Wright's Modification

After fixing the preparation.

1. Stain for one minute in carbol gentian violet Bioloid.
2. Wash in water for one minute.
3. Place in Lugol's solution Bioloid for from one to three minutes.
4. Wash in water and dry.
5. Differentiate in aniline-xylol-acetone Bioloid for two minutes.
6. Wash in xylol and dry.
7. Counterstain with dilute carbol fuchsin Bioloid for one minute, warming slightly.
8. Wash well in water, dry and mount.

PNEUMOCOCCI

Smith's Bacteria in Sputum

This has been found particularly useful in demonstrating the pneumococcus in the sputum. The sputum or other material should be fresh. The cover glasses should be spread as thinly as possible and fixed by passing three times through the flame in the usual manner.

1. Stain in aniline-gentian-violet solution Bioloid for a few seconds, gently warming until the staining fluid steams.
2. Wash in water.
3. Cover with Gram's iodine Bioloid for thirty seconds.
4. Wash with 95 per cent alcohol until the color ceases to come out.
5. Wash with ether for a few seconds. (To remove fat.)
6. Wash in absolute alcohol for a few seconds.
7. Stain one to two minutes in a saturated aqueous solution of eosin Bioloid.
8. Wash with absolute alcohol for a few seconds.
9. Cear with xylol.
10. Mount in balsam.

The pneumococcus is stained blue-black, while the capsule is stained pink. This method gives beautiful preparations. With the following modification it has been used by Smith as a routine stain for sputum. The advantage of this modification is that influenza bacilli and other bacteria which do not stain by Gram's method are clearly brought out, as are also eosinophilic leucocytes. This modification consists in washing the preparation with Loeffler's alkaline methylene-blue Bioloid just after it has been stained with eosin, as described above, and then, after the excess of eosin has been removed by the methylene-blue, steaming the methylene-blue solution for a few seconds while on the cover glass. The preparation is then washed in water, rinsed with alcohol, cleared with xylol, and mounted in balsam.

TUBERCLE BACILLI

Sputum—Carbol-Fuchsin Method

The morning sputum should be taken for examination. Select one of the dense, grayish-white particles, and with the aid of small pointed forceps or the platinum wire rub it over the surface of a cover glass. None of the surface of the cover glass should be allowed to become dry by evaporation, as this causes a precipitate to form, but more of the staining fluid should be added from time to time to keep it completely covered as evaporation occurs. The object of the heating is to impregnate thoroughly the bacilli with the dye.

2. Wash in water.
3. Decolorize in a 30 per cent aqueous solution of concentrated nitric acid until the red color disappears. Do not allow the acid to act on the preparation longer than a few seconds. The solution should also be applied to the uncharged side of the cover glass to remove any dried stain which may have collected thereon.
4. Wash thoroughly in water.
5. Wash in 95 per cent alcohol for thirty seconds.
6. Wash in water.
7. Stain in Loeffler's methylene-blue Bioloid for thirty seconds.
8. Wash in water, dry, and mount in xylol balsam.

The tubercle bacilli are stained red and the nuclei of cells and other bacteria are stained blue.

Smears—Gabbett's Method

This method has long been employed for staining tubercle bacilli, and presents the advantage in that Gabbett's solution II Bioloid decolorizes and at the same time stains structures other than the tubercle bacilli, blue.

1. Fix a thin smear, which has been made on a cover glass and allowed to dry in the air, by passing through a flame three times.
2. Cover with Gabbett's solution I Bioloid and warm it so that it steams, but does not boil, for from one to three minutes.
3. Wash in water.
4. Decolorize and stain for contrast by covering the smear with Gabbett's solution II Bioloid for one minute.
5. Wash in water, dry and mount.

If sections of tissue are being stained, they must, after final washing in water, be passed through absolute alcohol and then xylol before mounting in balsam. Owing to the fact that Bioloidin retains too much of the blue, this method is not suitable for use with Bioloidin sectons.

Paraffin Sections—Ziehl-Neelson Method

This stain is noted for its quick and powerful staining as well as the variety of uses to which it may be put.

1. A thin smear is made on a cover glass and allowed to dry in the air.
2. Fix by passing three times through the flame of an alcohol lamp or Bunsen burner, holding the preparation side up and using cover glass forceps.
3. Place as much of the stain on the preparation as the cover glass will hold and heat by passing through the flame until steam is formed, but do not let the stain boil. Continue this for from 1 to 3 minutes.
4. Wash in water.
5. Decolorize either by a 10 per cent solution of sulphuric acid until no more color comes away or by Gabbett's solution II Bioloid.
6. If sulphuric acid is used, a counter staining is obtained by Loeffler's methylene blue Bioloid in three minutes. The decolorization removes the red stain from all bacilli excepting tubercle which are shown on a blue background by the counter staining. If Gabbett's solution II Bioloid is used, the decolorization and staining are effected at the same time.
7. Wash in water, dry and mount.

This method is applicable to paraffin sections but not to celloidin or Bioloidin sections.

Bioloidin Sections—Carbol-Fuchsin Method

1. Stain rather lightly in alum-hematoxylin Bioloid.
2. Wash in water.
3. Dehydrate in 95 per cent alcohol.
4. Attach sections to slide by the ether-vapor method.
5. Carbol-fuchsin Bioloid two to five minutes steaming.
6. Water.
7. Orth's discharging fluid (acid alcohol) one-half to one minute.
8. Wash thoroughly in several changes of water to remove acid completely and to bring back blue color to nuclei.
9. Alcohol 95 per cent until fuchsin is entirely discharged.
10. Aniline followed by xylol; or blot and treat with xylol.
11. Xylol balsam.

The advantages of this method are—that the celloidin is colorless, the nuclei are stained blue, the rest of the tissue is colorless; the tubercle bacilli stand out in sharp contrast.

PROTOZOA—AMEBA COLI

Mallory's Differential Method

1. Harden in alcohol.
2. Stain sections in a saturated aqueous solution of thionin Bioloid three to five minutes.
3. Differentiate in a 2 per cent. aqueous solution of oxalic acid for one-half to one minute.
4. Wash in water.
5. Dehydrate in absolute alcohol.
6. Clear in xylol.
7. Xylol balsam.

The nuclei of the amebae and the granules of the mast cells are stained brownish red; the nuclei of the mast-cells and of all other cells are stained blue.

SPIROCHETAE

The Romanowsky stains are also useful for demonstrating Spirochetae. The preparations are dried in the air and may be stained by the following methods:

Wright's Method

1. Place in a test tube 10 cc. of distilled water, 1cc of Wright's stain Bioloid and 1 cc. of a 0.1 per cent solution of potassium carbonate.
2. Heat to boiling and cover the preparation with the hot mixture.
3. When the fluid on the preparation has become of a violet color and a thin yellow metallic scum has formed on the surface, pour off again.
4. Cover the preparation with the hot mixture after again heating in the tube.
5. Repeat this once more.
6. Dry and mount.

The material should be thinly spread on a cover glass, not on a slide, the cover glass to be held level with forceps during the staining.

The treponemata should stain intensely violet.

McNeal's Method

1. Make a smear as for blood.
2. Add McNeal's stain Bioloid for one minute.
3. Cover with distilled water containing a few drops of one per cent sodium carbonate solution for 5-10 minutes.
4. Wash, blot between filter paper, air dry and examine.

Other Romanowsky stains may be similarly applied.

Giemsa's Method

This is a modification of Giemsa's older method for staining the malarial parasites.

1. Fix blood films for one minute in absolute methyl alcohol.
2. Prepare a mixture of 10 cc. of distilled water and 14 drops of Giemsa's stain Bioloid. This must be freshly prepared. If the basic colors are to be given a greater intensity, a slight trace of sodium carbonate may be added to the water used for diluting the stain.
3. Cover the film with the diluted solution and allow to remain for 5 minutes.
4. Wash in water.
5. Dry between filter paper and mount for examination in the usual way.

Giemsa's Method (Giemsa's Old Formula Stain)

Ten drops of Giemsa's stain, old formula, Bioloid, diluted by gently shaking with 10 cc. of distilled water.

1. Preparation fixed in absolute alcohol fifteen minutes, or by drawing three times through the flame.
2. Mix.
3. Cover with the diluted stain.
4. Warm until a slight steam arises over the flame, allow to cool about fifteen seconds.
5. Pour off.
6. Replace by fresh fluid.
7. Repeat process four or five times, and mount in balsam.

In this method the staining of the parasites is intensely dark red. It is important that the slide or cover glass be free from grease, and that the test tube, the cover glass and forceps be clean, free from acid and any precipitated stain.

Schereschewsky's Modified Giemsa Method

This method, which has given excellent results, involves the use of two solutions which must be mixed immediately before using.

1. Smears on slides are air-dried and passed through a flame 3 times.
2. Prepare the staining solution by adding 13 drops of Schereschewsky's solution I Bioloid to 10 cubic centimeters of Schereschewsky's solution II Bioloid.
3. Heat the mixture to boiling and pour on the slide, allowing it to remain for from 3 to 5 minutes.
4. Pour off the stain and wash the preparation in neutral distilled water.
5. Dry rapidly in the air.
6. Repeat 3, 4 and 5 until the depth of staining required has been obtained.
7. Dry finally and mount.

Treponemae are stained deep pink with the background somewhat paler.

As in the case of most stains for spirochetae it is less difficult to obtain a well stained specimen than it is to find the bacilli in the preparation. The slide must be free from grease while the test tube and other accessories must be clean and free from acid as well as precipitated stain.

Bioloid-Black Method

The advantage of this method is the short space of time required and simplicity. It is, of course, not a staining method, but the result is a brown or black field in which the spirochetae and other cells appear as colorless refractive bodies.

1. Use a platinum loop and mix one loop full of serum with one of Bioloid-Black on the slide.

2. Spread immediately over the slide as in making a smear.

3. The film dries in about 30 seconds and is then ready for examination with oil immersion lens.

McJunkin's Method for Protozoa

Smears—

Application to smears for the demonstration of Protozoa and Bacteria.

1. Add one drop of McJunkin's protozoon stain Bioloid to 1 cc. of distilled water.

2. Float the cover glass preparation that has been fixed for ten minutes in equal parts of absolute alcohol and ether or in methyl alcohol, on the surface of the diluted stain for sixty minutes.

3. Wash with distilled water for one to five minutes.

4. Air dry and mount in colophonium-xylol.

Trypanosomes, for example, are well stained at the end of half an hour, while about one hour is required to stain Spirochetae Pallida heavily.

Sections—

Application to Sections of Tissue for the Demonstration of Protozoa, Bacteria, the Megakaryocytes of Bone Marrow, etc.

1. Tissue is cut into pieces not more than 2 mm. thick and placed in 1 part of absolute and 2 parts of saturated aqueous solution of mercuric chlorid for at least twenty-four hours, or it is fixed in 10 per cent dilution of liquor formaldehyde.

2. Sections not more than 3.5 microns are cut from paraffin blocks.

3. The staining is carried out just as in the case of smears, except that the preparations are allowed to stain over night.

4. The preparations are then washed with distilled water for one minute, and with a cloth or filter paper the excess of water is wiped from the slide or cover glass about the preparation.

5. Dehydrate in xylene containing 5 per cent of absolute alcohol, and 1 per cent colophonium. Mount in balsam Bioloid.

If the nuclei are not the proper red color and there is an excess of blue in the preparation, the slide is placed in the sunlight for several hours, as has been recommended by Mallory.

BIOLOID-BLACK
For Dark Ground Illumination

A finely divided, colloidal suspension of Chinese black,
free from interfering particles and extraneous matter.

BIOLOID

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BIOLOID

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BIOLOID

CHEMICALS AND SOLUTIONS

	Oz.	Lb.
ACACIA (Gum Arabic), powdered	$ .10	$ .50
ACETONE, pure white, 99% C. P.	.20	.90
ACETONE, U. S. P.	.15	.45
ACETYL CHLORIDE, C. P.	.60	5.00
ACETYL CHLORIDE, Pure	.30	2.25
ACID, ACETIC, ANHYDRIDE, C. P.	.45	3.35
ACID, ACETIC, for White Cell Count	.20	1.50
ACID, ACETIC, glacial, C. P., Sp. Gr. 1.058—99.5%	.20	.80
ACID, ACETIC, glacial, C. P., 99.9%	.25	1.10
ACID, ACETIC, C. P., 36%	.15	.50
ACIDS, AMINO, from beef, biuret free	2.75	30.00
ACID, ARSENIC, Pure	.25	1.15
ACID, ARSENOUS, C. P., lumps or powder	.15	.80
ACID, ASPARAGINIC, C. P.	4.75	45.00
ACID, BORIC, C. P., cryst.	.15	.75
ACID, BUTYRIC, Technical	.65	5.00
ACID, CARBOLIC, C. P., loose cryst.	.25	1.00
ACID, CARBOLIC, pure cryst.	.10	.40
ACID, CARBOLIC, U. S. P.	.15	.50
ACID, CARBOLIC, U. S. P., loose cryst.	.20	.85
ACID, CARMINIC	15.20	
ACID, CHROMIC, C. P. cryst.	.45	3.50
ACID, CITRIC, C. P., cryst.	.30	2.10
ACID, CITRIC, pure cryst.	.25	1.75
ACID, DICHROMATE SOLUTION, for cleansing Laboratory Glassware	.10	1.00
ACID, FORMIC, C. P., sp. gr. 1.060—25%	.20	1.20
ACID, GALLIC, C. P. cryst.	.35	2.60
ACID, HYDRIODIC, C. P., Sp. Gr. 1.70	.75	6.75
ACID, HYDROBROMIC, C. P., Sp. Gr. 1.38	.45	4.00
ACID, HYDROCHLORIC, C. P., Sp. Gr. 1.19	.15	.40
ACID, HYDROCHLORIC, C. P., Sp. Gr. 1.200	.15	.50
ACID, IODIC, C. P. cryst.	1.90	27.00
ACID, IODIC ANHYDRIDE, C. P. cryst.	2.45	
ACID, LACTIC, Sp. Gr. 1.12 U. S. P.	.40	3.20
ACID, LACTIC, C. P., Sp. Gr. 1.210	.45	3.75
ACID, MALIC	1.10	10.00
ACID, METAPHOSPHORIC	.35	2.50
ACID, MOLYBDIC, pure, 85% powd.	.40	3.60
ACID, MOLYBDIC, C. P., 85% powd.	.75	5.50
ACID, MOLYBDIC ANHYDRIDE, C. P., 100% powd.	1.00	9.00
ACID, NAPTHYLAMINESULPHONIC, C. P., (alpha) cryst.	1.10	11.50
ACID, NITRIC, C. P., Sp. Gr. 1.420	.20	.65

	Oz.	Lb.
ACID, NITRIC C. P., Sp. Gr. 1.20	.20	.65
ACID, NITRIC, C. P. 10%	.20	.60
ACID, NITRIC, Fuming, C. P., Sp. Gr. 1.486	.25	1.00
ACID, OLEIC, U. S. P.	.25	1.00
ACID, ORTHO PHOSPHORIC, 85% C. P.	.20	1.00
ACID, OSMIC, cryst. in ¼ gm. vial ¼ gm., $3.00; ½ gm., $5.00; 1 gm., $8.00.		
ACID, OXALIC, C. P., cryst.	.25	1.15
ACID, OXALIC, C. P., sublimed	.60	4.85
ACID, PERCHLORIC, C. P., Sp. Gr. 1.12	.60	9.00
ACID, PHOSPHORIC ANHYDRIDE, C. P.	.35	3.00
ACID, PHOSPHORIC, C. P., Sp. Gr. 1.7	.20	1.00
ACID, PHOSPHORIC, C. P., Sp. Gr. 1.057	.20	1.00
ACID, PHOSPHOROUS, C. P., Sp. Gr. 1.12	.45	3.90
ACID, PHOSPHOTUNGSTIC, C. P., cryst.	2.40	24.50
ACID, PHTHALIC, pure, cryst.	.30	2.75
ACID, PHTHALIC, C. P., cryst.	.90	8.25
ACID, PICRIC, cryst. pure, 10% water	.33	2.75
ACID, PICRIC, C. P., cryst.	.65	9.20
ACID, PYROGALLIC, resublimed	.35	3.50
ACID, PYROGALLIC, C. P., needles	.65	9.50
ACID, ROSOLIC, C. P., lumps	1.00	15.10
ACID, SALICYLIC, U. S. P., cryst.	.15	.90
ACID, SILICIC, Natural	.20	1.90
ACID, SILICIC, by Wet Process	.15	.90
ACID, SILICOTUNGSTIC, C. P., cryst.	1.75	21.10
ACID, STEARIC, U. S. P.	.15	.70
ACID, SUCCINIC, cryst.	1.95	22.75
ACID, SULPHANILIC, cryst. white	.50	3.35
ACID, SULPHANILIC, C. P., cryst.	.65	9.75
ACID, SULPHOCARBOLIC, about 30%	.25	3.40
ACID, SULPHOSALICYLIC, cryst.	.85	9.25
ACID, SULPHURIC, C. P., Sp. Gr. 1.840	.15	.60
ACID, SULPHURIC, C. P., 10%	.15	.60
ACID, SULPHURIC, C. P., Fuming for Nitrogen determination	.25	.90
ACID, SULPHURIC, C. P., Fuming with 10% P_20_5	.25	2.00
ACID, SULPHUROUS, C. P., 6%	.15	.80
ACID, TANNIC, C. P., powd.	.50	3.35
ACID, TARTARIC, C. P., cryst.	.20	2.05
ACID, TRICHLORACETIC, cryst.	.40	4.25
ACID, TRICHLORACETIC, U. S. P., cryst.	.50	5.25
AGAR AGAR. (See Nutrient Substances).		
ALBUMIN, EGG	.30	2.95
ALCOHOL, 95%	.15	1.50
ALCOHOL, ABSOLUTE, 99.8%, Bioloid	.20	1.90
ALCOHOL, ABSOLUTE, SQUIBB'S per ½ lb., $2.00		
ALCOHOL, ABSOLUTE, SQUIBB'S, in 1 lb. bottles		3.25

	Oz.	Lb.
ALCOHOL, ABSOLUTE, Denatured	.15	.50
ALCOHOL, AMYLIC, pure	.30	1.50
ALCOHOL, AMYLIC, for Fat Determination	.75	2.60
ALCOHOL, CAPRYLIC	1.35	13.35
ALCOHOL, METHYLIC, in 15 cc. tubes, 50c each.		
ALCOHOL, METHYLIC, 95%	.10	.45
ALCOHOL, METHYLIC, C. P., Acetone free	.15	1.45
ALCOHOL, METHYLIC, Rectified for Bacterial Stains	.20	2.00
ALDEHYDE, CINNAMIC	1.25	12.35
ALPHANAPHTHOL, C. P., needles	1.35	13.50
ALPHANAPHTHYLAMINE, pure	1.25	12.35
ALUM, AMMONIA, pure cryst.	.10	.45
ALUM, CHROMIC, pure cryst.	.10	.45
ALUM, FERRIC, pure cryst.	.10	.40
ALUM, POTASSIUM, pure cryst.	.10	.28
ALUMINA CREAM, reagent	.50	4.50
ALUMINUM, THICK SHEETS	.20	1.50
ALUMINUM AMMONIUM SULPHATE, U. S. P., cryst.	.15	.50
ALUMINUM CHLORIDE, pure cryst.	.15	.95
ALUMINUM CHLORIDE, anhydrous sublimed	.35	2.50
ALUMINUM CHLORIDE, 8% solution	.25	2.40
ALUMINUM SULPHATE, C. P., cryst.	.15	.50
ALUMINUM POTASSIUM SULPHATE, U. S. P., cryst.	.10	.45
AMINOIDS, amino-acids from beef, biuret free	2.75	30.00
AMINOIDS, PEPTONE	2.00	23.00
AMMONIA WATER, 28%	.20	.60
AMMONIA WATER, 20%	.20	.60
AMMONIA WATER, 10%	.15	.55
AMMONIACAL SILVER, Magnesia Mixture	.40	3.00
AMMONIUM ACETATE, C. P., cryst.	.50	1.60
AMMONIUM BICHROMATE, pure, cryst.	.15	1.00
AMMONIUM BICHROMATE, C. P., cryst.	.20	1.25
AMMONIUM BITARTRATE, gran.	.25	2.25
AMMONIUM CARBONATE, C. P.	.20	.55
AMMONIUM CHLORIDE, C. P., gran. powd.	.35	1.00
AMMONIUM CHROMATE, neutral, C. P., cryst.	.25	3.00
AMMONIUM CITRATE, pure, gran.	.25	2.45
AMMONIUM FLUORIDE, C. P., cryst.	.30	4.00
AMMONIUM HYDROSULPHIDE, solution	.15	1.00
AMMONIUM HYDROXIDE, C. P., sp. gr. 0.900	.20	.60
AMMONIUM IODIDE, U. S. P.	.65	6.30
AMMONIUM MOLYBDATE, C. P., cryst.	.35	3.25
AMMONIUM MOLYBDATE, solution	.20	1.60
AMMONIUM NITRATE, C. P., cryst.	.15	1.50
AMMONIUM NITROFERROCYANIDE, cryst.	.90	12.10
AMMONIUM OXALATE, C. P., cryst.	.20	2.00
AMMONIUM PERSULPHATE, C. P., cryst.	.25	2.60

	Oz.	Lb.
AMMONIUM PHOSPHATE, C. P., cryst.	.15	1.30
AMMONIUM PHOSPHOMOLYBDATE, pure	1.40	14.55
AMMONIUM SULPHATE, C. P., cryst.	.10	.45
AMMONIUM SULPHATE, solution for Ross-Jones test	.20	.65
AMMONIUM SULPHIDE, solution	.15	1.00
AMMONIUM SULPHOCYANATE, C. P., cryst.	.25	2.35
AMMONIUM TARTRATE, neutral, pure, gran.	.20	1.85
AMYGDALIN	2.05	23.00
AMYL ACETATE, pure	.15	1.10
AMYL NITRITE, U. S. P. tubes each, 50c		
ANDRADE INDICATOR	.50	4.50
ANETHOL, liquid	.45	4.35
ANILINE, C. P.	.15	1.30
ANILINE ACETATE	.25	2.00
ANILINE, BLACK	1.25	13.50
ANILINE HYDROCHLORIDE, cryst.	.20	1.80
ANILINE WATER, SATURATED	.20	.85
ANILINE, YELLOW	1.35	14.25
ANILINE-XYLOL	.30	1.75
ANTIFORMIN	.30	2.00
ANTIMONY CHLORIDE, cryst.	.25	1.50
ANTIMONY OXIDE, pure	.15	.60
ANTIMONY POTASSIUM TARTRATE, crystals	.10	1.10
ANTIPYRINE, U. S. P., crystals	.90	9.90
ARSENIC TRIOXIDE, lumps or powder, C. P.	.15	1.10
ASPARAGIN	4.50	49.40
AZOLITMIN, C. P. per gm., 75c	18.00	
BARIUM ACETATE, C. P., cryst. powd.	.25	2.00
BARIUM CHLORIDE, C. P., cryst.	.30	1.00
BARIUM CHROMATE, powd.	.15	1.10
BARIUM DIOXIDE, C. P., powd.	.10	1.00
BARIUM HYDROXIDE, C. P., cryst.	.15	1.30
BARIUM HYPOSULPHITE	.30	3.65
BARIUM NITRATE, C. P., cryst.	.15	1.00
BARIUM SULPHATE for X-ray diagnosis	.10	.45
BARIUM SULPHIDE, pure, gray; powd.	.15	1.05
BEEF EXTRACT. (See Nutrient Substances.)		
BENEDICT'S SOLUTION, Qualitative	.35	1.75
BENEDICT'S SOLUTION, Quantitative	.45	2.95
BENZALDEHYDE, U. S. P.	.30	3.40
BENZENE, C. P.	.15	1.00
BENZIDINE, purified for blood and water analysis	.65	8.00
BENZINE, PETROLEUM ETHER	.15	.80
BENZOLE, 90%, water white	.10	.65
BENZOLE, C. P.	.15	1.00
BENZOYL CHLORIDE, pure	.50	5.50
BETANAPHTHOL, U. S. P. Resublimed	.15	1.60

	Oz.	Lb.
BISMARCK BROWN	.85	11.00
BISMUTH CHLORIDE, gran.	.60	5.60
BISMUTH CITRATE, U. S. P., powd.	.40	4.20
BISMUTH IODIDE, pure	.90	11.50
BISMUTH NITRATE, pure, cryst.	.40	3.95
BISMUTH SUBNITRATE, C. P., powd.	.50	5.20
BORAX, C. P., cryst.	.10	.60
BROMINE, C. P.	.35	4.00
BROMINE WATER (Saturated)	.10	.50
BUNGE'S MORDANT	.60	5.60
CADMIUM ACETATE, pure	.30	3.25
CADMIUM CHLORIDE, gran.	.30	2.75
CADMIUM IODIDE, cryst.	.55	5.80
CADMIUM NITRATE, cryst.	.30	2.50
CADMIUM POTASSIUM IODIDE, C. P., powd.	.75	8.25
CALCIUM CARBONATE, precipitated, pure	.10	.35
CALCIUM CHLORIDE, C. P., fused	.10	1.00
CALCIUM FLUORIDE	.20	1.45
CALCIUM HYPOPHOSPHITE—U. S. P.	.20	1.35
CALCIUM LACTATE, U. S. P., powd.	.30	2.60
CALCIUM OXIDE from marble	.15	.60
CALCIUM PHOSPHATE—Dibasic—pure, powd.	.15	.95
CALCIUM PHOSPHATE—Monobasic, powd.	.15	1.35
CALCIUM PHOSPHATE, powd.	.15	1.15
CALCIUM SULPHATE, C. P., powd.	.15	1.00
CARBON DISULPHIDE—highly purified	.10	.55
CARBON TETRACHLORIDE, C. P.	.20	1.30
CARMINE, No. 40	1.00	11.00
CASEIN, technical	.10	.70
CHLORAL HYDRATE, crystals	.20	1.45
CHLORINE WATER	.15	1.30
CHLOROFORM, pure	.10	.60
CHLOROFORM, C. P.	.25	1.30
CHLOROFORM, SQUIBB'S		1.20
CHLOROFORM, SQUIBB'S per ½ lb., 70c		
CHOLESTERIN, 10 gms., $15.00	35.00	
CHROMIUM POTASSIUM SULPHATE, C. P., cryst.	.15	1.15
CINCHONINE—pure, cryst., alkaloid	1.20	14.25
CITRAL	.95	10.10
COBALT ACETATE, C. P.	.45	4.60
COBALT CARBONATE, C. P.	.40	3.90
COBALT CHLORIDE—pure	.30	3.50
COBALT SULPHATE—pure	.20	1.50
COCHINEAL TINCTURE	.35	3.40
COLLODION—U. S. P.	.35	1.10
COLLOIDAL GOLD SOLUTION for Lange test	.40	2.75
COLLOIDAL IRON	.10	1.00

		Oz.	Lb.
CONGO RED		1.00	13.00
COPPER ACETATE, neutral, pure cryst.		.10	.95
COPPER AMMONIUM CHLORIDE, C. P., cryst.		.15	1.75
COPPER CARBONATE, pure, green		.15	.95
COPPER CHIPS		.10	.75
COPPER CITRATE, C. P.		.40	3.45
COPPER NITRATE, pure, cryst.		.15	.95
COPPER SULPHATE—anhyd. pure, powd.		.10	.90
COPPER SULPHATE, C. P., cryst.		.15	.95
COPPER TARTRATE, pure		.15	1.45
CREATINE	$5.00 gm.		
CREATININE	6.00 gm.		
CREATININE, ZINC CHLORIDE	3.50 gm.		
CREOSOTE, BEECHWOOD, pure		.15	1.60
CRESOL—U. S. P.		.10	.50
CRESOLSULPHONEPHTHALEIN (ortho)	$2.25 gm.		
CURARE, tested	3.00 gm.		
DEXTRIN, yellow		.10	.25
DEXTROSE, pure, cryst.		.20	1.65
DEXTROSE, C. P.		.25	2.85
DEXTROSE, highest purity anhydrous		.50	5.90
DEXTROSE, pure		.10	.30
DIAZO REAGENT—Solution A, Ehrlich's		.20	1.25
DIAZO REAGENT—Solution B, Ehrlich's		.20	1.25
DIMETHYLAMIDOAZOBENZOLE, C. P.		3.60	38.00
DIMETHYLAMINE BENZALDEHYDE, para, per gram, 70c		16.50	
DIMETHYLAMINOAZOBENZENE		1.30	14.00
DIMETHYLGLYOXIME, C. P., cryst.		3.25	
EDESTIN		17.50	
EOSIN, bluish		2.00	
EOSIN, yellowish		1.65	
ESBACH'S SOLUTION		.20	1.10
ESCHKA'S MIXTURE		.15	1.30
ETHER, anhydrous, distilled over sodium		.20	1.30
ETHER, CONC., Sp. Gr. 0.725-0.728		.10	.65
ETHER, CONC., SQUIBB'S, in ½ lb. cans	each, 50c		
ETHER, CONC., SQUIBB'S, in 1 lb. cans			.90
ETHER, DENATURED—Excellent for all laboratory purposes		.10	.40
ETHER, DENATURED, dried		.15	1.00
ETHYL ACETATE—So-called Absolute		.15	1.40
FEHLING'S SOLUTION, No. 1, alk.		.20	1.60
FEHLING'S SOLUTION, No. 2, copper		.10	.50
FEHLING'S SOLUTION TABLETS	45c per box.		
FERRIC CHLORIDE, pure, cryst.		.10	.50
FERRIC CHLORIDE SOLUTION		.10	.40
FERROUS SULPHATE, C. P., cryst.		.10	.55

	Oz.	Lb.
FIBRIN, from blood	1.50	16.00
FLUORCHROME	.25	5.10
FORMALDEHYDE, 40%, U. S. P.	.15	.65
FORMALDEHYDE, NEUTRAL	.15	.75
FURFURAL	1.50	17.45
GALLEIN, dry, powd.	.60	5.75
GELATINE. (See Nutrient Substances.)		
GENTIAN VIOLET B	1.25	14.00
GLASS WOOL, acid washed	.60	5.40
GLUCOSE, pure, cryst.	.20	1.65
GLUCOSE, anhyd., C. P.	.50	5.90
GLYCERINE, C. P., Sp. Gr. 1.25	.10	.75
GOLD CHLORIDE—Acid	13.50	
GOLD CHLORIDE, pure, cryst. per gm., $1.00	13.75	
GOLD & SODIUM CHLORIDE, U. S. P.	6.60	
GUAIACOL, U. S. P.	.90	9.20
GUM, GUAIAC	.20	1.80
HAEMATIN	5.20	
HAEMATOXYLIN, pure	.70	7.50
HAEMATOXYLIN, cryst., C. P. 10 gms., $2.25	5.75	
HAINES' SOLUTION, qualitative	.20	1.70
HAINES' SOLUTION, quantitative	.30	2.50
HELIOTROPIN, cryst.	.70	6.20
HEMAGLOBIN, powder	.30	2.90
HEXAMETHYLENAMINE—U. S. P. gran.	.20	1.95
HYDRAZINE SULPHATE, cryst.	2.50	24.00
HYDROGEN PEROXIDE, C. P.	.15	.70
HYDROGEN PEROXIDE—U. S. P.		.25
HYDROGEN SULPHIDE WATER	.20	1.60
HYDROXYLAMINE HYDROCHLORIDE, C. P., cryst.	5.25	
HYDROXYLAMINE SULPHATE, cryst.	1.00	12.00
HYDROXYLAMINE SULPHATE, 25% Solution	.25	2.25
INDIA INK—In solution	.55	6.50
INDIGO, MADRAS	.15	1.25
INDIGO—Synthetic	.15	1.40
IODINE, pure, resublimed	.60	5.60
IODINE TRIBROMIDE, U. S. P. Dry	.65	7.50
IODINE, WATER, saturated	.10	.80
IODOFORM—U. S. P.	.60	6.60
INDIGO CARMINE, U. S. P. Dry	.50	5.11
IRON ACETATE—Basic	.15	1.25
IRON AMMONIUM SULPHATE, Ferrous, C. P., cryst.	.15	1.00
IRON AMMONIUM SULPHATE, Ferric, C. P., cryst.	.15	1.00
IRON FERROCYANIDE (Prussian Blue), powd.	.15	1.85
IRON, by Hydrogen, powder	.20	1.75
IRON PHOSPHATE, Ferrous, true	.15	.85

	Oz.	Lb.
IRON SULPHATE, Ferric	.10	.60
IRON SULPHATE, C. P., ferrous, cryst.	.15	1.00
IRON SULPHIDE, granulated, sticks or lumps	.10	.60
KAOLIN—U. S. P.	.10	.15
LACMOID	4.25	
LACTOSE, granulated	.10	.60
LACTOSE, powder	.10	.60
LANGES' COLLOIDAL GOLD	.40	2.75
LANGES' COLLOIDAL GOLD, Electrolyte	.20	1.25
LEAD—free from silver, gran.	.10	.60
LEAD ACETATE, C. P., cryst.	.10	.80
LEAD CARBONATE, C. P., powd.	.15	.80
LEAD CHLORIDE, pure	.15	.98
LEAD CHROMATE, C. P., powd.	.20	1.30
LEAD NITRATE—U. S. P.	.10	.60
LEAD OXIDE, RED, pure, powd.	.10	.55
LEAD OXIDE, YELLOW, C. P., powd.	.20	1.60
LEAD SUBACETATE, C. P.	.10	1.00
LEAD SUBACETATE, test solution, Sp. Gr. 1.24	.10	.50
LEAD SUBACETATE, HORNE'S	.10	.80
LEGUMIN	17.50	
LEUCIN Per gram., $6.75		
LEVULOSE, C. P., cryst.	5.10	55.00
LIME, CHLORINATED	.10	.60
LIME WATER	.10	.65
LIQUID PETROLATUM—U. S. P.	.10	.50
LITHIUM CARBONATE, C. P., powd.	.35	3.40
LITMUS PAPER, Blue, Neutral, and Red, per vial of 100 strips, 10c each.		
LITMUS SOLUTION, purified	.30	2.50
LUTEIN SOLUTION AMPULES (6 in box), per box, $1.00.		
MAGNESIA MIXTURE, for Phosphates	.15	.90
MAGNESIUM AMMONIUM CHLORIDE, C. P., cryst.	.15	1.00
MAGNESIUM AMMONIUM PHOSPHATE, powd.	.20	1.15
MAGNESIUM CHLORIDE, C. P., cryst.	.20	1.60
MAGNESIUM METAL (Ribbon)	6.00	
MAGNESIUM METAL (Shavings)	.85	8.75
MAGNESIUM METAL (Wool)	1.00	14.00
MAGNESIUM NITRATE, Fused	.10	.70
MAGNESIUM PEROXIDE	.30	3.25
MAGNESIUM SULPHATE, C. P., cryst.	.15	.85
MALACHITE GREEN, cryst.	2.00	18.00
MANGANESE DIOXIDE	.15	1.00
MANNITE	.65	6.65
MERCURY, C. P.	.25	2.50
MERCURY ACETATE (Mercurous), C. P.	.45	5.80
MERCURY ACETATE (Mercuric), C. P.	.35	3.35

	Oz.	Lb.
MERCURY BICHLORIDE, C. P., cryst.	.30	3.20
MERCURY BINIODIDE AMPULES, Solution in oil, 1/6 grain, 10 in box per box, $1.00		
MERCURY BISULPHATE, powd.	.20	1.60
MERCURY BROMIDE (Mercuric), cryst.	.80	12.00
MERCURY CHLORIDE, U. S. P. (Mercuric)	.25	2.15
MERCURY CYANIDE (Mercuric), C. P., cryst.	.50	5.30
MERCURY IODIDE, U. S. P. (red), powd.	.50	5.30
MERCURY IODIDE, yellow (Mercurous), C. P., powd.	.75	9.75
MERCURY NITRATE, (Mercurous), C. P., cryst.	.30	3.50
MERCURY NITRATE, (Mercuric), cryst.	.35	4.15
MERCURY OXIDE, red, (Mercuric), C. P., powd.	.25	3.00
MERCURY OXIDE, yellow, (Mercuric), C. P., powd.	.50	6.00
MERCURY OXYCYANIDE, C. P., cryst.	.80	12.40
MERCURY SALICYLATE, AMPULES, Suspension in Fat., 1, 1½ or 2 grains, 12 in box per box, $1.00		
MERCURY SALICYLATE, Suspension in Fat., 1, 1½ or 2 grains to cc., 30 cc. bottles per bottle, $1.00		
MERCURY SUCCINIMIDE, powd.	1.70	19.50
MERCURY SULPHATE (Mercuric), powd.	.20	1.80
MERCURY SULPHIDE, red, powd.	.45	4.30
MERCURY POTASSIUM IODIDE, C. P., cryst.	.90	9.50
METAPHENYLENEDIAMINE HYDROCHLORIDE	3.25	
METHYL ALCOHOL (Synthol)	.15	1.45
METHYL ORANGE INDICATOR	.60	1.20
METHYL RED	4.90	
METHYL VIOLET B	1.50	16.00
METHYLENE BLUE, BX	1.10	14.00
METHYLENE IODIDE, C. P.	1.15	23.40
MILK SUGAR, powder	.10	.60
MILLON'S REAGENT, for albumen	.25	2.15
NESSLER'S SOLUTION	.40	4.25
NEUTRAL CARMINE SOLUTION	.20	1.50
NICKEL CHLORIDE, C. P., cryst.	.20	1.95
NICKEL SULPHATE, C. P., cryst.	.10	.40
NICOTINE	22.00	
NITRO BENZENE	.15	.60
NUTROSE	1.00	11.00
NYLANDER'S REAGENT, for Glucose	.20	1.00
OBERMAYER'S REAGENT	.25	1.75
OIL, ANILINE, pure	.10	.75
OIL, BERGAMOT	.60	7.50
OIL, CEDARWOOD, for clearing	.10	.85
OIL, CEDARWOOD, for immersion objectives	.40	4.50
OIL, TURPENTINE, U. S. P.	.15	.75
OIL, TURPENTINE, refined	.10	.65
OIL, TURPENTINE, ozoinzed	.30	1.65

	Oz.	Lb.
OLEUM ORIGANI CRETICI	.40	4.50
ORCEIN ... Per gram., 45c		
OSMIC ACID, see Acid, Osmic		
PALLADIUM, BLACK	Prices on application.	
PALLADIUM CHLORIDE		
PALLADIUM NITRATE		
PALLADIUM SPONGE		
PALLADIUM POTASSIUM CHLORIDE		
PARADIMETHYLAMINOBENZALDEHYDE, 55c per gram	15.50	
PARAFFIN, m. p. 52 to 53 deg. C.	.10	.40
PARAFORMALDEHYDE	.25	2.11
PARALDEHYDE, U. S. P.	.20	1.71
PARANITRANILINE, pure	.35	3.25
PARAPHENYLENDIAMINE, purified	.85	8.75
PARAPHENYLENDIAMINE, technical	.50	4.11
PARAPHENYLENDIAMINE HYDROCHLORIDE	2.80	26.50
PEPTONE. (See Nutrient Substances.)		
PETROLATUM, white	.10	.50
PETROLATUM, white, tubes ... each, 25c		
PETROLATUM, yellow	.10	.35
PETROLATUM, liquid, U. S. P.	.10	.50
PHENOL, C. P., loose cryst.	.15	.75
PHENOLPHTHALEIN, U. S. P.	.25	2.21
PHENOLPHTHALEIN INDICATOR	.40	4.00
PHENOLPHTHALEIN SOLUTION, 1%	.25	2.50
PHENOLSULPHONEPHTHALEIN (Phenol red) ... per grm., $2.25		
PHENOLTETRACHLORPHTHALEIN ... Per grm., 50c		
PHENYLHYDRAZINE, base, C. P.	1.40	14.75
PHENYLHYDRAZINE HYDROCHLORATE, C. P.	1.40	14.50
PHENYLHYDRAZINE HYDROCHLORIDE	1.30	13.50
PHLOROGLUCIN, C. P., cryst.	16.00	
PHOSPHORUS, yellow sticks, U. S. P.	.20	1.35
PHOSPHORUS PENTACHLORIDE	.40	2.70
PHOSPHOTUNGSTIC ACID	2.00	21.50
PHTHALIC ANHYDRIDE, subl.	.20	2.65
PILOCARPINE	11.50	
PIPERINE	1.25	13.00
PLATINIC CHLORIDE, C. P., cryst. ... per grm., $3.10		
PLATINUM, BLACK, sponge sheet wire. (Price on application.)		
POTASSIUM ACETATE, U. S. P.	.15	1.20
POTASSIUM ARSENATE, pure	.20	1.45
POTASSIUM ARSENITE, pure	.20	1.45
POTASSIUM BICARBONATE, C. P., cryst.	.20	1.00
POTASSIUM BICHROMATE, C. P., cryst.	.20	1.30
POTASSIUM BISULPHATE, C. P., cryst.	.25	2.00
POTASSIUM BITARTRATE, C. P., cryst., powd.	.20	1.80
POTASSIUM BROMATE, C. P., cryst.	.40	5.20

	Oz.	Lb.
POTASSIUM BROMIDE, C. P., cryst.	.20	1.30
POTASSIUM CARBONATE, anhydrous, C. P.	.25	2.00
POTASSIUM CARBONATE, C. P., powd.	.25	2.00
POTASSIUM CHLORATE, C. P., cryst.	.15	1.00
POTASSIUM CHLORIDE, C. P., cryst.	.20	1.75
POTASSIUM CHROMATE, C. P., cryst.	.25	2.00
POTASSIUM CYANIDE, 5% solution	.20	.60
POTASSIUM DICHROMATE, C. P., cryst.	.20	1.60
POTASSIUM FERRICYANIDE, C. P., cryst.	.25	2.60
POTASSIUM FERROCYANIDE, C. P., cryst.	.25	2.00
POTASSIUM HYDROXIDE, white, purified, sticks	.20	1.50
POTASSIUM HYDROXIDE, C. P., by alcohol, sticks	.30	2.55
POTASSIUM IODATE, pure cryst.	.55	8.20
POTASSIUM IODIDE, C. P., cryst.	.50	5.75
POTASSIUM IODIDE, neutral, C. P.	.50	6.00
POTASSIUM NITRATE, C. P., cryst.	.20	1.60
POTASSIUM NITRITE, C. P., sticks	.25	2.00
POTASSIUM OXALATE, C. P., neutral	.30	2.40
POTASSIUM PERCHLORATE, C. P., cryst.	.40	6.40
POTASSIUM PERMANGANATE, C. P., cryst.	.25	2.00
POTASSIUM PERMANGANATE, 1% aqueous solution	.20	.60
POTASSIUM PHOSPHATE, Monobasic, C. P., cryst.	.20	2.00
POTASSIUM PHOSPHATE, Dibasic	.20	1.70
POTASSIUM PHOSPHATE, Tribasic	.25	2.35
POTASSIUM PHOSPHATE, Primary, Anhydrous, C. P.	1.00	13.00
POTASSIUM SODIUM TARTRATE, C. P., cryst.	.20	1.30
POTASSIUM SULPHATE, C. P., cryst.	.20	1.30
POTASSIUM SULPHITE, C. P.	.25	2.00
POTASSIUM SULPHOCYANATE, C. P., cryst.	.35	3.35
POTASSIUM TARTRATE	.20	1.80
POTASSIUM TETRAOXALATE, C. P., cryst.	.25	2.30
PROTEIN, VEGETABLE	9.10	
PRUSSIAN, BLUE	.20	1.80
PURDY'S SOLUTION	.20	.75
PYRIDINE, MEDICINAL	.35	2.95
PYRIDINE, C. P.	.75	7.00
PYROCATECHIN, resublimed	2.25	
PYROGALLOL, C. P., needles	.65	10.40
QUININE HYDROCHLORIDE, U. S. P.	1.70	
QUINONE	2.80	
RESORCIN, C. P.	.85	9.10
RESORCIN, purified	.60	7.00
RICE'S SOLUTION No. 1—Hypobromite Solution for Urea in Urine	.20	1.00
RICE'S SOLUTION No. 2—Alkaline Solution for Urea in Urine	.20	1.00
RUHEMANN'S SOLUTION for Uric Acid	.25	1.60
SACCHAROSE, C. P.	.15	1.10
SAFRANIN	1.45	15.00

	Oz.	Lb.
SALICIN, U. S. P.	2.60	27.10
SILVER CHLORIDE, pure	1.65	17.25
SILVER NITRATE, C. P., cryst.	1.25	13.50
SILVER NITRATE SOLUTION, for chlorides	.25	2.10
SILVER NITRITE, pure, cryst.	1.85	19.75
SILVER, for standardizing ---- Per gram, 10c	2.25	23.85
SODIUM, METALLIC	.45	1.60
SODIUM ACETATE, C. P., cryst.	.20	1.30
SODIUM ALIZARINE MONOSULPHONATE	2.65	28.30
SODIUM AMALGAM	.50	4.00
SODIUM AMMONIUM PHOSPHATE, C. P., cryst.	.25	1.30
SODIUM ARSENATE, U. S. P.	.15	.85
SODIUM BICARBONATE, pure powd.	.10	.20
SODIUM BICARBONATE, C. P., cryst.	.10	.50
SODIUM BICARBONATE INDICATOR SOLUTION	.20	.60
SODIUM BISULPHATE, C. P., cryst.	.25	1.30
SODIUM BISULPHITE, purified	.10	.55
SODIUM BITARTRATE, cryst.	.25	1.60
SODIUM BORATE, pure	.10	.30
SODIUM BORATE, pure calcined	.15	.60
SODIUM BORATE, C. P., fused	.25	1.05
SODIUM BROMATE, C. P., cryst.	.55	8.50
SODIUM BROMIDE, U. S. P.	.20	1.25
SODIUM CARBONATE, C. P., cryst.	.15	.60
SODIUM CARBONATE, C. P., anhydrous	.25	1.60
SODIUM CHLORIDE, C. P., cryst.	.15	.60
SODIUM CHLORIDE, C. P., fused	.20	.90
SODIUM CITRATE, U. S. P.	.25	1.80
SODIUM COBALTIC NITRITE SOLUTION	.30	2.80
SODIUM FLUORIDE, pure	.15	.60
SODIUM FORMATE, dry	.25	2.05
SODIUM GLYCOCHOLATE, powdered	.65	8.85
SODIUM HYDROXIDE, purified white sticks	.10	.50
SODIUM HYDROXIDE, pure by alcohol sticks	.15	.85
SODIUM HYDROXIDE, solution 27%, free from Nitrogen	.20	.80
SODIUM HYDROXIDE VOLUMETRIC SOLUTION, Normal	.15	.80
SODIUM HYDROXIDE VOLUMETRIC SOLUTION N-10	.15	.80
SODIUM HYDROXIDE VOLUMETRIC SOLUTION N-50	.15	.80
SODIUM HYPOPHOSPHITE, U. S. P.	.25	1.45
SODIUM IODATE, pure	.55	8.50
SODIUM IODIDE, U. S. P.	.45	4.80
SODIUM NITRITE, C. P., cryst.	.20	.80
SODIUM NITRITE, C. P., sticks	.25	1.30
SODIUM NITRITE, potassium free	.25	1.20
SODIUM NITROPRUSSIDE, cryst.	.85	9.75
SODIUM NITROPRUSSIDE, C. P., cryst.	1.60	21.00
SODIUM PERBORATE	.10	.75

	Oz.	Lb.
SODIUM PEROXIDE, C. P.	.50	1.10
SODIUM PERSULPHATE	.15	.80
SODIUM PHOSPHATE, C. P., cryst.	.15	.80
SODIUM PHOSPHATE, C. P., Dibasic, Anhydrous	.65	6.50
SODIUM PHOSPHOMOLYBDATE, C. P.	3.50	28.00
SODIUM PHOSPHOTUNGSTATE, C. P.	3.10	25.10
SODIUM POTASSIUM TARTRATE, pure	.20	1.25
SODIUM PYROPHOSPHATE, C. P., cryst.	.15	1.00
SODIUM SALICYLATE, C. P.	.25	1.35
SODIUM SULPHATE, pure, dried	.10	.30
SODIUM SULPHATE, anhydrous, C. P.	.15	.65
SODIUM SULPHATE, C. P., cryst.	.15	.60
SODIUM SULPHIDE, C. P., cryst.	.20	1.00
SODIUM SULPHIDE, solution 5%	.15	.80
SODIUM SULPHITE, C. P., cryst.	.15	.60
SODIUM SULPHITE, dried, 80—85%	.10	.35
SODIUM SULPHOCARBOLATE, U. S. P.	.15	75
SODIUM SULPHOCYANATE, C. P., cryst.	.25	2.40
SODIUM TAUROCHOLATE	1.35	14.25
SODIUM THIOSULPHATE, C. P., cryst.	.15	.65
SODIUM TUNGSTATE, C. P.	.45	4.25
SODIUM TUNGSTATE SOLUTION	.25	2.00
SOLUBLE STARCH	.20	1.15
SOLUTION, AMMONIUM HYDROXIDE, N-10	.20	.80
SOLUTION, AMMONIUM HYDROSULPHITE	.20	1.00
SOLUTION, AMMONIUM MOLYBDATE	.20	1.60
SOLUTION, AMMONIUM SULPHATE, for Ross-Jones test	.20	.65
SOLUTION, BARIUM HYDROXIDE	.25	1.75
SOLUTION, COLLOIDAL GOLD, for Lange test	.40	2.75
SOLUTION, LEAD SUBACETATE, Sp. Gr. 1.24	.20	.50
SOLUTION, MERCURIC CHLORIDE 1%	.20	.75
SOLUTION, POTASSIUM CYANIDE 5%	.20	1.60
SOLUTION, PURDY'S	.20	.75
SOLUTION, RUHEMANN'S, for uric acid	.35	3.60
SOLUTION, SCHUCHARDT'S	.30	3.00
SOLUTION, SODIUM COBALTIC NITRITE	.30	2.80
SOLUTION, SODIUM HYDROXIDE, free from Nitrogen, 27%	.20	.80
SOLUTION, SODIUM HYDROXIDE NORMAL	.20	.80
SOLUTION, SODIUM HYDROXIDE, 1/10 N	.20	.80
SOLUTION, SODIUM HYDROXIDE, 1/50 N	.20	.80
SOLUTION, SODIUM SULPHIDE	.20	.80
SOLUTION, TIN CHLORIDE	.20	1.60
SOLUTION, TOEPFER'S DIMETHYLAMIDOAZOBENZOL	.40	4.25
SOLUTIONS, VOLUMETRIC, acid or alkali	.20	.80
SOLUTION, ZINC IODIDE—STARCH	.15	1.30
STRONTIUM CHLORIDE, C. P., cryst.	.15	.75
STRONTIUM CHLORIDE, prec., free from sodium	.15	.95

	Oz.	Lb.
SULPHUR CHLORIDE SOLUTION	.15	.70
SYNTHOL	.15	1.45
TETRABROMPHENOLSULPHONEPHTHALEIN (Brom Phenol Blue) Per gm., $2.25		
THIOUREA, C. P., cryst.	1.30	13.00
THORIUM NITRATE, pure	1.30	12.95
THYMOL	1.20	18.25
THYMOLSULPHONEPHTHALEIN (Thymol Blue), acid range Per gm., $2.25		
THYMOLSUPHONPHTHALEIN (Thymol Blue), Alkaline range Per gm., $2.25		
TIN CHLORIDE, Stannic, Fuming	.25	2.05
TIN CHLORIDE SOLUTION	.20	1.60
TOKAL—FOLIN METHOD FOR AMMONIA	.20	2.00
TOLUENE, purified	.15	.65
TOLUOL, pure B. P. 110-112 deg. C.	.10	.50
TROPAEOLIN 00	1.40	14.10
TURMERIC PAPER, vial—100 strips, 10c.		
TYROSIN, per gram, $4.50.		
URANIN	1.40	17.50
URANIN, Yellow II	2.00	22.40
URANIUM ACETATE, pure	.50	7.35
URANIUM ACETATE, free from Sodium	1.65	16.00
URANIUM NITRATE, for phosphates	1.10	10.40
UREA, C. P., crystals	.50	7.15
UREASE	4.30	
UREASE, tablets (40 in pkg.) Per pkg., $1.00		
UREASE, tablets (500 in bottle) Per bottle, $6.00		
UREASE, tables (1,000 in bottle) Per bottle, $10.00		
VANILLIN, U. S. P.	1.60	20.00
XYLENE	.10	.40
XYLOL, pure	.10	.40
XYLOL, C. P.	.15	.65
ZINC ACETATE, U. S. P.	.10	.65
ZINC CARBONATE, U. S. P.	.15	.75
ZINC CHLORIDE, C. P., sticks	.15	.90
ZINC IODIDE—STARCH SOLUTION	.25	1.30
ZINC METAL, pure granulated	.15	.60
ZINC METAL, Arsenic free	.15	.75
ZINC METAL, arsenic free, nearly free from iron	.20	.95
ZINC NITRATE, C. P., sticks	.20	1.15
ZINC SULPHATE, C. P.	.10	.65
ZINC SULPHIDE, purified	.30	2.60

These items have been selected for biochemical and biological uses. No effort has been made to include all chemicals which we carry.

INDICATORS

Also Refer to "Chemicals and Solutions" and "Dry Stains"

	10 grms.	25 grms.	100 grms.
ACID SALICYLIC	$0.45	$0.90	$ 3.15
ALIZARINE	1.00	2.00	7.00
ALPHANAPHTHOLBENZOL	.40	.80	3.50
ALPHANAPHTHYLAMINE	.50	1.00	3.50
ANDRADE INDICATOR (see Chemicals and Solutions).			
AZOLITMIN Per gram, 75c.			
BENZOPURPURIN	.50	1.00	3.50
BRILLIANT GREEN	.75	1.50	5.25
BROM CRESOL, Purple, Range 5.2 to 6.8 Per 1/10 gram., 25c			
BROM PHENOL, Blue, Range 2.8 to 4.5 Per 1/10 gram., 25c			
BROM THYMOL, Blue, Range 6.0 to 7.6 Per 1/10 gram., 25c			
CARMEIN	9.10	19.25	
CARMINIC ACID	6.50	14.00	
O-CARBOXYBENZENEAZODIMETHYLANILINE, range 4.4 to 6.0 Per 1/10 gram, 25c			
O-CRESOLSULPHONEPHTHALEIN, range 7.2 to 8.8 Per 1/10 gram., 25c			
COCHINEAL	.40	.80	3.50
CONGO RED	.40	.85	3.35
CORALLINE	1.00	2.00	7.10
CRESOL BLUE, range 7.2 to 8.8 Per 1/10 gram., 25c			
DIBROMCRESOLSULPHONEPHTHALEIN, range 5.2 to 6.2 Per 1/10 gram., 25c			
DIBROMCRESOLSULPHONEPHTHALEIN, range 6.0 to 7.6 Per 1/10 gram., 25c			
DIMETHYLAMIDOAZOBENZENE	.50	1.10	3.85
DIMETHYLAMIDOAZOBENZALDEHYDE	6.50	15.00	
DIMETHYLGLYOXIME	1.50	3.00	
DIPHENYLAMINE	.30	.50	1.75
EOSIN	.75	1.60	5.45
ETHYL ORANGE	1.40	2.70	9.40
FLUORESCEIN	.75	1.50	5.20
FUCHSIN, ACID	.70	1.40	4.95
FUCHSIN, BASIC	.55	1.10	3.80
HAEMATOXYLIN, C. P.	2.25	5.00	17.50
IODO—EOSIN	1.20	2.45	8.50
LACMOID	1.50	3.20	12.00
LITMUS, (purified po.)	.60	1.20	4.50

	10 grms.	25 grms.	100 grms.
M-DINITROBENZOYLENE UREA, range 6 to 8, Per gram., 85c			
METHYL ORANGE	.55	1.10	3.85
METHYL RED, range 4.4 to 6.0	2.00	4.50	15.75
METHYL VIOLET	.60	1.20	4.20
NEUTRAL RED	.85	1.75	6.15
PARA-NITROPHENOL	.40	.80	3.50
PHENACETOLIN	1.10	2.20	7.70
PHENOLPHTHALEIN	.25	.55	1.95
PHENOL RED, range 6.8 to 8.4, per 1/10 gram., 25c.			
PHENOLSULPHONEPHTHALEIN, range 6.8 to 8.4, Per 1/10 gram., 25c			
PHENYLHYDRAZINE	.75	1.50	1.25
PHENYLHYDRAZINE HYDROCHLORIDE	.50	1.00	3.50
PORRIER'S BLUE	.90	1.80	6.30
ROSOLIC ACID	.85	1.75	6.10
SODIUM NITROPRUSSIDE	.40	.75	2.75
TETRABROMPHENOLSULPHONPHTHALEIN, range 2.8 to 4.5, Per 1/10 gram., 25c			
THYMOL BLUE (acid), range 1.2 to 3.0, Per 1/10 gram., 25c			
THYMOL BLUE (alkaline), range 8.0 to 9.6, Per 1/10 gram., 25c			
THYMOLPHTHALEIN	1.75	3.50	10.50
THYMOLSULPHONEPHTHALEIN (acid), range 1.2 to 3.0, Per 1/10 gram., 25c			
THYMOLSULPHONEPHTHALEIN (alkaline), range 8.0 to 9.6, Per 1/10 gram., 25c			
TOLUYLENE RED	.85	1.75	6.10
TROPAEOLIN 00	.60	1.30	4.50

SYNTHOL

Owing to the difficulties experienced in obtaining ethyl alcohol we have perfected Synthol, the name given by us to our reagent methyl alcohol, so that it may be used as a reagent in the place of ethyl alcohol.

Synthol is a particularly suitable solvent for biological stains.

Synthol is an excellent fixative and hardening agent.

Synthol is anhydrous and acid free.

A sample in a sealed ampule will be forwarded to you on request.

BIOLOID DRY STAINS

Below are listed the Aniline dyes employed generally in Bacteriological laboratories. Many of these products have been purified in our laboratories and carefully compared with those dyes formerly imported.

Our patrons will find that our dry stains if employed in the same quantities as indicated in old working formulas, will give sure and uniform results.

	10 grms.	25 grms.	100 grms.
ACETIN BLUE	$ 0.40	$ 0.80	$ 2.75
ACID BROWN	.45	1.00	3.50
ACID CARMINIC	6.50	14.00	
ACID FUCHSIN	.55	1.15	3.85
ACID GREEN	.40	.75	2.60
ACID MAGENTA	.60	1.20	4.25
ACID ORANGE	.55	1.25	3.95
ACID RUBIN	.60	1.25	4.30
ACID YELLOW	.45	.90	3.15
ACRIFLAVINE	6.75	12.50	
ALIZARIN BLUE	1.00	2.10	7.50
ALIZARIN GREEN	1.50	3.00	10.25
ALIZARIN LAKE	.45	1.00	3.50
ALIZARIN MONOSULPHONATE SODIUM	1.00	2.00	7.00
ALIZARIN RED	1.10	2.25	7.50
ALKALI BLUE	.75	1.50	5.25
ALKANIN	2.30	5.50	19.50
AMARANTH	1.00	2.00	7.00
AMMONIUM CARMINATE	Per gram, $1.00		
AMMONIUM PICRATE	.85	1.70	5.95
ANILIN BLUE, sol. in water	.60	1.20	4.20
ANILIN BLUE, sol. in alcohol	.75	1.55	5.35
ANILIN BROWN	.40	.75	2.70
ANILIN GREEN	.85	1.80	6.30
ANILIN RED	.40	.80	2.90
ANILIN ORANGE	.45	1.10	4.00
ANILIN VIOLET	.55	1.15	4.10
ANILIN YELLOW	.45	.90	3.15
ANILIN YELLOW AURAMINE	.40	.70	2.60
AURIN	.40	.75	2.65
AURAMINE	.45	.95	3.25
AZO BLUE	.40	.75	2.75
AZO CARMINE	.95	2.15	6.95
AZOPHORROT	1.05	2.20	8.25
AZUR BLUE I (GIEMSA)	8.50	18.00	
AZUR BLUE II (GIEMSA)	8.00	17.50	
AZUR II EOSIN	9.00	18.00	
BENZOAZURIN	.45	.90	4.05
BENZOPURPURIN	.50	1.00	3.50

	10 grms.	25 grms.	100 grms.
BIEBRICH SCARLET	.75	1.50	5.30
BIONDI-EHRLICH-HEIDENHAIN STAIN	10.00	25.00	
BISMARCK BROWN	.40	.75	2.60
BLUE DE LYON	.80	1.60	5.60
BLUE DE LYON O	.60	1.20	4.20
BLUE LUMIERE	.90	1.80	6.25
BORAX CARMINE	.75	1.55	5.25
BRILLIANT GREEN	.75	1.50	5.25
BRILLIANT GREEN, Medicinal	1.50	3.00	10.25
CARMINE, po.	.40	.80	2.85
CHINA BLUE	.80	1.45	5.10
CHINA GREEN	.80	1.65	5.70
CHROMOGEN	1.90	4.20	15.00
CHRYSOIDIN	.35	.70	2.75
CHRYSANILIN-YELLOW	.45	.95	3.15
CHRYSAMIN	.30	.65	2.30
CONGO RED	.40	.85	2.80
COERULEIN	1.50	3.00	10.25
CORALLIN, spirit soluble	.90	1.80	6.35
CORALLIN, water soluble	1.00	2.00	7.10
CRYSTAL VIOLET	.55	1.10	3.95
CYANIN BLUE	1.65	3.20	12.25
DAHLIA VIOLET	.90	1.85	6.25
DELTA PURPURIN	.70	1.45	5.00
DIAMOND FUCHSIN	.55	1.20	3.85
ECHT GREEN	1.50	3.00	10.25
ECHT RED	.95	2.10	6.80
ECHT YELLOW	.45	.90	3.25
EOSIN BLUISH, water sol.	1.00	1.75	6.50
EOSIN YELLOWISH, water sol.	.75	1.60	5.45
EOSIN YELLOWISH, alcohol sol.	.75	1.50	5.25
EOSIN METHYLENE BLUE	1.00	2.00	7.20
ERYTHROSIN	.90	1.80	6.40
ETHYL GREEN	.75	1.55	5.35
FAST YELLOW S.	.90	1.85	6.25
FLUORESCEIN	.75	1.50	5.20
FUCHSIN, BASIC, for bacillus	.55	1.10	3.80
FUCHSIN, ACID	.70	1.40	4.95
GALLEIN	.55	1.15	3.85
GENTIAN VIOLET	.60	1.20	4.25
GALLOCYANIN	.80	1.60	5.65
GENTIAN VIOLET B.	.60	1.25	4.20
GOLD ORANGE	.60	1.30	4.35
GREEN, EMERALD	.75	1.50	5.25
GREEN, SOLID	.80	1.65	5.70
GREEN, METHYL (Aniline green)	1.00	2.00	7.20
GREEN, METHYLENE	1.20	2.40	8.45

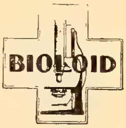
	10 grms.	25 grms.	100 grms.
GREEN, MALACHITE	.65	1.30	4.55
GREEN, VICTORIA	.90	1.75	6.15
HAEMATEIN	2.00	4.40	15.20
HAEMATOXYLIN, dark cryst.	.30	.65	2.30
HAEMATOXYLIN, chem. pure, cryst., white	2.25	5.00	17.50
HARRIS' STAIN	8.10	16.20	
HASTING'S STAIN	9.00	22.00	
HELIANTHIN	.50	1.00	3.50
HOFFMAN VIOLET	1.15	2.30	8.25
INDIGO CARMINE	1.00	2.10	7.00
INDULIN, water sol.	.35	.75	2.65
INDULIN, spirit sol.	.40	.85	2.95
IODINE EOSIN (Iodeosin)	1.20	2.45	8.50
JANUS GREEN	1.10	2.25	8.00
JENNER'S STAIN	1.15	2.35	8.40
LACMOID	1.80	3.55	12.50
LEISHMAN'S STAIN	9.00	22.00	
LIGHT GREEN, S. F.	.40	.75	2.75
MAGDALA RED	.70	1.40	4.95
MAGENTA	.75	1.50	5.25
MARTIUS YELLOW	.45	1.05	3.50
MALACHITE GREEN, powder	.70	1.45	5.10
MALACHITE GREEN, cryst.	.80	1.60	5.60
METANIL YELLOW	1.10	2.20	7.75
METHYL BLUE	.90	1.80	6.25
METHYL EOSIN	1.00	2.10	7.50
METHYL RED	2.00	4.50	15.75
METHYL GREEN (Aniline green)	1.00	2.00	7.10
METHYL GREEN, true, yellowish	2.00	4.25	14.00
METHYL ORANGE	.55	1.10	3.85
METHYL VIOLET, 1 B	.60	1.20	4.20
METHYL VIOLET, 2 B	.70	1.40	4.90
METHYL VIOLET, 6 B	.70	1.45	5.00
METHYL VIOLET, medicinal	1.25	2.50	8.75
METHYLENE BLUE, BX	.45	.90	3.15
METHYLENE BLUE, med., pure	.95	1.90	6.50
METHYLENE BLUE FOR WRIGHT'S STAIN	1.00	2.05	7.00
METHYLENE BLUE—EOSIN	1.00	2.10	7.35
METHYLENE VIOLET	3.50	7.10	24.75
METHYLENE GREEN	1.20	2.40	8.40
MUSCARIN	.95	1.90	7.10
NEUTRAL BLUE	1.25	2.60	9.15
NEUTRAL RED	.85	1.75	6.15
NAPHTHOL GREEN	.50	1.00	3.50
NAPHTHOL YELLOW	.40	.85	2.90
NIGROSINE, water sol.	.35	.75	2.65
NIGROSINE, spirit sol.	.40	.75	2.65

	10 grms.	25 grms.	100 grms.
NIGHT BLUE	.95	2.10	6.85
NILE BLUE CHLORHYDRATE	1.10	2.25	7.80
NILE BLUE SULPHATE	1.20	2.45	8.50
ORANGE G, crystals	.55	1.10	3.85
PATENT BLUE	.75	1.50	5.25
PHLOXINE RED	.65	1.30	4.55
PHOSPHINE	.70	1.40	4.90
PICRO-AMMONIA	.90	1.85	6.50
PICROCARMINE Per gram, $1.00			
ORANGE I	.85	1.75	6.15
ORANGE II	.60	1.35	4.40
ORANGE III	.80	1.70	5.90
PROVOFLAVIN	5.50	11.00	
PRIMULIN	.65	1.25	4.40
PROFLAVINE	5.00	10.00	
PYOKTANIN	1.50	3.00	10.50
PYOKTANIN BLUE	1.50	3.10	10.75
PYRONIN	1.75	3.50	12.25
RESORCIN-FUCHSIN	1.15	2.35	8.25
RHODAMIN B	1.25	2.50	9.00
ROCHELENE (Rocellin)	.95	2.00	6.75
ROMANOWSKY'S STAIN	2.35	5.25	19.25
ROSANILIN	1.00	2.00	7.00
ROSANILIN HYDROCHLORIDE	.60	1.20	4.20
ROSANILIN BITARTRATE	.75	1.55	5.45
ROSANILIN SULPHATE	.85	1.75	6.15
ROSE BENGAL	1.50	3.00	10.25
RUBIN S.	.75	1.50	5.25
RUBY S.	.70	1.40	4.95
SAFRANIN O, water sol.	.60	1.25	4.35
SCARLET RED	.75	1.55	5.35
SCARLET RED, medicinal	1.75	3.60	12.55
SMARAGD GREEN, cryst.	.75	1.60	5.75
SOLID GREEN	.80	1.60	5.60
SUDAN I	.60	1.20	4.20
SUDAN II	.65	1.25	4.40
SUDAN III	.75	1.50	5.30
SUN YELLOW	.65	1.20	4.50
TARTRAZINE-BUFF-YELLOW	.75	1.55	5.70
THIAZIN RED	.80	1.65	5.80
THIONIN	1.10	2.20	7.70
TOLUIDIN BLUE	.90	1.75	6.15
TROPAEOLIN OOO No. 2	.85	1.70	6.00
TROPAEOLIN OO	.60	1.30	4.50
TROPAEOLIN O	.80	1.70	5.90
TRYPAN BLUE	.100	2.00	7.00
TRYPAN RED	5.00	10.00	
URANIN	.60	1.20	4.30
VESUVIN	.40	.75	2.60
VICTORIA BLUE	.75	1.50	5.25
VICTORIA GREEN	.95	2.10	6.85
WATER BLUE	.85	1.80	6.30
WILSON STAIN	6.75	13.50	
WRIGHT'S STAIN	2.25	5.00	17.00

BIOLOID STAINING SOLUTIONS

The following list of stains, which is limited to those more generally employed, includes products of our Research Laboratories. The solutions here enumerated are prepared by us under the most exacting conditions and maintained at the highest standard of deportment and uniformity, not barring the quality formerly imported and by many heretofore considered inimitable.

We guarantee our staining solutions without reservation and, in the interest of mutual protection against a possible substitution of inferior grades, we have designed and copyrighted a special design, of which a reproduction is here shown.

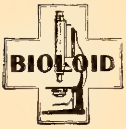


This "BIOLOID" label will identify all bacteriological and biological preparations of our manufacture, developed in conjunction with many scientific investigators for whose support and guidance we are truly grateful.

Aside from the stains here being listed, we are prepared to compound special solutions or to assist in the development of formulae to meet specific requirements, and we offer to place our laboratories at the disposal of patrons desiring experimental quantities of unusual materials for research purposes.

We trust that you will avail yourself of this service freely and solicit your correspondence with our assurance of co-operation to the fullest extent possible.

The Will Corporation


BIOLOID

BIOLOID STAINING SOLUTIONS

	Oz.	½ Lb.	Lb.
ACID FUCHSIN, 2% aqueous sol.	.25	.70	1.00
ACID HEMALUM, MAYER'S	.25	1.20	2.75
ACID METHYLENE BLUE, GABBETT'S	.25	1.25	2.00
ALBERT'S STAIN FOR DIPHTHERIA	.35	1.75	3.50
ALTMAN'S ANILINE ACID FUCHSIN	.50	3.25	6.00
ALUM CARMINE DAHLIA	.50	3.15	5.50
ALUM CARMINE, GRENACHER'S	.25	.65	.85
ALUM COCHINEAL	.25	.75	1.25
ALUM HAEMATOXYLIN	.25	1.20	2.25
ANILINE FUCHSIN SOLUTION	.30	1.60	2.70
ANILINE—GENTIAN VIOLET, EHRLICH'S	.45	2.40	4.50
ANILINE WATER, GENTIAN VIOLET, GRAM'S	.35	1.75	3.50
ANILINE-XYLOL—ACETONE (Wright's Modification)	.30	1.35	2.50
BIOLOID BLACK (Dark Ground Illuminator)	.75		
BIONDI-EHRLICH-HEIDENHAIN'S TRIPLE MIXTURE	.40	2.85	5.50
BISMARCK BROWN (1% aqueous sol.)	.30	.90	1.65
BISMARCK BROWN, WEIGERT'S	.45	2.70	5.10
BORAX CARMINE, GRENACHER'S (Aqueous)	.20	.80	1.35
BORAX CARMINE, GRENACHER'S (Alcoholic)	.25	.80	1.35
BURRILL STAIN FOR TUBERCLE BACILLUS	.95	7.50	14.00
CARBOL-FUCHSIN, GABBETT'S	.25	.60	1.10
CARBOL-FUCHSIN, ZIEHL-NEELSON'S	.25	.60	1.10
CARBOL-GENTIAN, VIOLET, CZAPLEWSKY'S	.25	.80	1.35
CARBOL-GENTIAN, VIOLET (Wright's Modification)	.25	.80	1.35
CARMINE, NEUTRAL	.35	1.90	3.50
CHROMIC ACID, 5%	.25	.75	1.20
CONGO RED	.25	1.10	2.00
CARMINE-ALUM, MAYER (Carmalum)	.25	.90	1.45
DAHLIA, Sat. aqueous sol.	.50	3.15	5.50
DAHLIA-ACETO-ALCOHOL	.75	3.15	5.50
EOSIN, Bluish	.35	1.90	3.50
EOSIN, Yellowish	.30	1.20	2.25
EOSIN, Yellowish in 70% Alcohol	.35	1.90	3.40
EHRLICH'S NEUTRAL SOLUTION	.35	1.95	3.60
EHRLICH'S TRIACID SOLUTION	.35	1.75	2.80
EHRLICH'S TRIPLE MIXTURE FOR EOSINOPHILES	1.10	4.80	9.50
EHRLICH'S TRIGLYCERINE MIXTURE	.25	1.30	1.80
ERYTHROSINE	.35	1.90	3.50
FUCHSIN, Sat. alc. sol.	.35	2.00	3.75
FUCHSIN, Sat. aqueous solution	.60	3.85	7.25
FUCHSIN ACID, 1% aqueous solution	.25	.90	1.55
FUCHSIN, BASIC aqueous solution	.25	1.25	2.00
FUCHSIN-METHYLENE BLUE	.55	3.50	6.70
GABBET'S STAIN No. 1	.25	.60	1.10

	Oz.	½ lb.	Lb.
GABBET'S STAIN No. 2	.25	1.25	2.00
GABBET'S ACID METHYLENE BLUE	.25	1.25	2.00
GENTIAN VIOLET, 2% aqueous solution	.25	1.50	2.65
GENTIAN VIOLET, STIRLING'S	.50	2.40	4.50
GIEMSA'S AZUR II SOLUTION	.50	3.05	5.75
GIEMSA'S EOSIN SOLUTION	.35	1.80	3.50
GIEMSA'S BLOOD STAIN (Old Formula)	1.30	9.10	15.00
GIEMSA'S BLOOD STAIN (New Formula)	1.00	6.45	9.50
GIEMSA'S (ROMANOWSKY) MALARIAL	2.75	18.00	
GIEMSA'S SPIROCHETA PALLIDA	1.00	6.45	9.50
GLYCERIN-ETHER MIXTURE	.25	1.10	2.00
GOLD CHLORIDE, 1% solution	2.00	16.00	28.00
GOLDHORN'S POLYCHROME METHYLENE BLUE	.60	3.50	7.00
GOLDHORN'S EOSIN SOLUTION	.60	3.50	7.00
GOLDHORN'S "ONE" SOLUTION	1.00	6.45	9.50
GRAM'S IODINE SOLUTION	.25	.60	1.20
GRAM'S ANILINE—GENTIAN VIOLET SOLUTION	.25	1.85	3.50
HAEMATOXYLIN, BOEHMER'S	.25	.90	1.70
HAEMATOXYLIN, DELAFIELD'S	.25	.95	1.75
HAEMATOXYLIN, ACID, EHRLICH'S	.35	1.95	3.00
HAEMATOXYLIN, GRENACHER'S	.20	.90	1.50
HAEMATOXYLIN SOLUTION (Alc. Absolute)	1.00	6.80	13.00
HAEMATOXYLIN IRON, HAIDENHAIN'S No. 1	.25	.60	.85
HAEMATOXYLIN IRON HAIDENHAIN'S No. 2	.25	.65	1.25
HARRIS' MODIFICATION OF ROMANOWSKY'S STAIN	.50	3.00	5.80
HASTING'S BLOOD STAIN	.50	3.10	5.90
HEMALUM, MAYER'S	.25	1.20	2.25
INDIA INK FOR SPIROCHETA PALLIDA (Bioloid-Black)	.75		
IODINE SOLUTIONS, GRAM'S	.25	.60	1.20
JENNER'S BLOOD STAIN	.50	3.10	6.00
KRAUSS—GIEMSA, TWO SOLUTION (See Giemsa No. I and II)			
LEISHMAN'S STAIN	.50	2.40	4.50
LITHIUM CARMINE, ORTH'S	.35	2.10	3.55
LOEFFLER'S METHYLENE BLUE	.35	1.55	2.75
LUGOL'S SOLUTION	.30	1.40	2.60
MALACHITE GREEN	.25	1.20	2.35
MALLORY'S ANILINE BLUE	.30	1.40	2.50
MAY-GREENWALD STAIN	.50	3.10	6.00
McJUNKIN'S PROTOZOON	.70	4.60	8.75
McJUNKIN'S BLOOD	.50	3.15	5.95
McJUNKIN'S BENZIDINE BLOOD STAIN	.50	3.15	5.95
McNEAL'S STAIN	.35	2.00	3.75
METHYL GREEN, PAPPENHEIM'S	.70	4.25	8.00
METHYL GREEN, 1% aqueous sol.	.40	1.40	2.50
METHYL ORANGE, Sat. aqueous sol.	.35	1.35	2.40
METHYL VIOLET	.25	.60	.85

	Oz.	½ lb.	Lb.
METHYLENE BLUE, aqueous	.25	1.15	2.00
METHYLENE BLUE, NEISSERS'	.25	.95	1.55
METHYLENE BLUE, LOEFFLERS'	.35	1.55	2.75
METHLENE BLUE, POLYCHROME, UNNAS'	.30	1.35	2.50
METHYLENE BLUE, ACID, GABBETTS'	.25	1.25	2.00
METHYLENE BLUE, Alcoholic solution	.25	1.15	2.00
MUIR'S MORDANT	.25	1.15	2.00
NEISSER'S STAIN (Solution I)	.40	2.30	4.25
NEISSER'S STAIN (Solution II)	.30	1.70	3.00
NEUSSER STAIN	.30	1.55	2.85
NOCHT'S BLOOD STAIN No. 1	.35	1.40	2.50
NOCHT'S BLOOD STAIN No. 2	.35	1.40	2.50
ORANGE G	.25	.60	.95
ORCEIN, 1% solution	.30	1.30	2.40
PAPPENHEIM'S STAIN, METHYL GREEN—PYRONIN	.70	4.25	8.00
PHOSPHOMOLYBDIC ACID, 10% aqueous sol.	.40	2.10	3.75
PICRIC ACID, Saturated alcoholic solution	.35	1.70	2.75
PICRIC ACID, Saturated aqueous solution	.25	.40	.75
PICRO—ANILINE BLUE	.25	.70	1.00
PICRO—ALCOHOL, GAGE'S	.25	.60	.90
PICROCARMINE	.25	1.60	3.10
PICROCARMINE, WEIGERTS'	.25	1.65	3.20
PICROCARMINE, RANVIER'S	.25	.90	1.60
PICRO—FUCHSIN, VAN GIESON'S	.25	.85	1.25
PONDER'S STAIN FOR DIPHTHERIA	.50	3.10	5.90
PYRONIN, 1% aqueous solution	.45	3.35	6.50
RESORCIN-FUCHSIN SOLUTION, WEIGERT'S	.30	1.35	2.40
ROMANOWSKY'S STAIN No. 1	.40	2.25	4.25
ROMANOWSKY'S STAIN No. 2	.25	.75	1.25
SAFRANIN, Aqueous 1%	.40	3.10	5.80
SCHERESCHEWSKY'S STAIN No. 1	1.00	6.95	12.00
SCHERESCHEWSKY'S STAIN No. 2	.25	.60	.90
SKELTON'S STAIN (Eosin) No. 1	.60	2.80	4.50
SKELTON'S STAIN (Methylene Blue) No. 2	.35	2.15	4.00
SUDAN III	.45	2.50	4.75
TANNIC ACID, 10% aqueous solution	.25	1.00	1.75
THIONIN SOLUTION	.50	3.25	6.25
TIEDEMAN'S STAIN	1.00	6.95	12.00
TOLUIDINE BLUE	.50	3.25	6.25
UNNA'S POLYCHROMATIC METHYLENE BLUE	.30	1.35	2.50
VAN GIESON'S SOLUTION	.25	.85	1.05
VESUVIN	.25	.90	1.65
WATER BLUE, 2% aqueous solution	.25	1.50	2.65
WILLIAMS' INVARIABLE STAIN	.40	2.60	5.00
WILSON'S STAIN	.70	3.75	7.15
WRIGHT'S STAIN	.50	2.85	5.50
ZIEHL-NEELSON'S STAIN	.25	.60	1.10

BIOLOID BLOOD REAGENTS

Methods of Folin and Wu for Non-Protein Nitrogen, Urea, Creatinine and Creatine, Uric Acid and Sugar; Methods of Myers and Wardell for Cholesterol; Method of Rappleye for Chlorides; and Method of Van Slyke, Stillman and Cullen for Alkali Reserve.

NON-PROTEIN-NITROGEN	50 cc.	125 cc.	250 cc.	500 cc.
ACID DIGESTION MIXTURE	$ .75	$1.35	$2.40	$3.75
NESSLER'S SOLUTION	.75	1.35	2.40	3.75
SODIUM HYDROXIDE SOLUTION	.35	.50	.85	1.40
AMMONIUM SULFATE IN N/5 H_2 SO_4 V. S.	.40	.60	.95	1.25
UREA				
JACK BEAN POWDER 25c per 25 gm.				
PERMUTIT 25c per 25 gm.				
TOKAL 25c per 25 gm.				
PYRO-BUFFER	.55	1.00	1.75	3.25
HYDROCHLORIC ACID, N/20 V. S.	.35	.50	.65	.80
BORAX, SATURATED SOLUTION	.25	.40	.60	.80
URIC ACID				
URIC ACID STANDARD, $1.00 per 200 cc. bot.				
SODIUM SULFITE SOLUTION	.25	.40		
SODIUM CYANIDE SOLUTION	.50	.90	1.45	2.25
URIC ACID REAGENT	.65	1.15	2.00	3.40
SILVER LACTATE IN LACTIC ACID	.65	1.15	2.00	3.40
SODIUM CARBONATE SOLUTION	.25	.40	.65	.90
SODIUM CHLORIDE IN N/10 HCl. V. S.	.40	.60	.95	1.25
CREATININE				
STANDARD CREATININE SOLUTION	.75	1.35	2.40	3.75
HYDROCHLORIC ACID N/1 V. S.	.35	.50	.65	.80
PICRIC ACID SOLUTION	.40	.60	.75	.90
SODIUM HYDROXIDE SOLUTION	.35	.50	.95	1.20
SUGAR				
STANDARD SUGAR SOLUTION	.35	.50	.70	1.25
ALKALINE COPPER TARTRATE SOLUTION	.55	1.00	1.75	3.00
PHENOL REAGENT	.65	1.15	2.00	3.40
SODIUM TUNGSTATE SOLUTION	1.05	1.50	2.20	3.60
SULFURIC ACID 2/3 N. V. S.	.35	.50	.65	.80
SULFURIC ACID 2 N. V. S.	.35	.50	.65	.80
SODIUM CARBONATE, SATURATED SOLUTION	.40	.60	.95	1.25
HYDROCHLORIC ACID	.25	.40	.50	.60
CHOLESTEROL				
PLASTER OF PARIS 10c per 100 gm.				
CHLOROFORM	.45	.60	.75	1.00
SULFURIC ACID	.45	.65	.75	.90
NAPHTHOL GREEN B 50c per 10 gm.				
CHOLESTEROL 90c per 1 gm.				
ACETIC ANHYDRIDE	.45	.65	.80	1.25
CHLORIDES				
SILVER NITRATE SOLUTION, STANDARD	1.00	1.40	2.00	3.25
POTASSIUM SULFOCYANATE, STANDARD	.50	.85	1.10	1.75
IRON AMMONIUM ALUM INDICATOR	.35	.50	.75	1.00
ALKALI RESERVE				
HYDROCHLORIC ACID N/50 V. S.	.50	.90	1.40	1.75
SODIUM HYDROXIDE N/50 V. S.	.60	1.00	1.50	1.85
PHENOLSULPHONEPHTHALEIN INDICATOR	.40	.60	.75	1.00
STANDARD PHOSPHATE SOLUTION (P_H=7.2)	.50	.85	1.40	2.00

REAGENTS, INDICATORS, STAINS AND CULTURE MEDIA IN TABLET FORM

(Directions with each Package)

FOR URINE ANALYSIS—		Each
CITRIC ACID, gr. 1	tube of 20	$ .30
FEHLING'S TEST	carton of 24	.30
INDIGO TEST FOR SUGAR	tube of 20	.30
PICRIC ACID, gr. 1	tube of 20	.30
POTASSIUM FERROCYANIDE, gr. 1	tube of 20	.30
SALICYL-SULPHONIC ACID, gr. 2	tube of 16	.30

FOR WATER ANALYSIS—	Weight Per Tablet	Per Pkg. of 25
AMMONIUM CHLORIDE	0.00016 gm.	$ .30
LEAD ACETATE	0.0184 gm.	.30
META-PHENYLENEDIAMINE SULPHATE	0.01 gm.	.30

NESSLER'S SOLUTION—

Boxes of 30 capsules, each containing 0.5 cc. $1.45

Boxes of 24 capsules, each containing 2 cc. 1.75

OXALIC ACID	0.1 gm.	.30
POTASSIUM CHROMATE	0.0065 gm.	.30
POTASSIUM FERROCYANIDE	0.013 gm.	.30
POTASSIUM NITRATE	0.00144 gm.	.30
POTASSIUM PERMANGANATE	0.00395 gm.	.30
SILVER NITRATE	0.0096 gm.	.30
SOAP		.30
SODIUM ACID SULPHATE	0.324 gm.	.30
ZINC DUST	0.13 gm.	.30
ZINC SULPHIDE	0.25 gm.	.30

FOR SEWAGE ANALYSIS—		
OXALIC ACID	0.0079 gm.	.30
POTASSIUM PERMANGANATE	0.00395 gm.	.30
PRYOGALLIC ACID	0.032 gm.	.30
SODIUM HYDROXIDE	0.13 gm.	.30

Photographic Developers, Intensifiers, Toners, Fixers, Hardeners, Alkali Restrainers, Sensitizers, Film Stains, Reversing Compounds, etc., are also supplied in tablet form. Please inform us of your needs.

TEST INDICATORS IN TABLET FORM	Weight Per Tablet	Per Tube of 10
*INDIGO-CARMINE		.30
*LACMOID		.30
*METHYL ORANGE		.30
*PHENOLPHTHALEIN		.30
*ROSOLIC ACID		.30
STARCH	0.5 gm.	.30

*One dissolved in 10 cc. of solvent forms the indicator of the terminations of reactions in volumetric analysis, etc.

MICROSCOPIC STAINS IN TABLET FORM	Weight Per Tablet	Per Tube of 10
BISMARCK BROWN, pure	0.1 gm.	.28
BORAX METHYLENE BLUE		.28
EHRLICH TRIPLE STAIN		.35
EOSIN, pure	0.1 gm.	.28
EOSIN-AZUR (for Giemsa Staining)	0.038 gm.	.60
EOSIN-METHYLENE BLUE (Louis Jenner's Stain)	0.05 gm.	.28
FUCHSINE (Basic), pure	0.1 gm.	.28
GENTIAN VIOLET, pure	0.1 gm.	.28
GRAM'S IODINE SOLUTION, 15 cc.		.28
HAEMALUM		.28
HAEMATOXYLIN, pure	0.1 gm.	.28
METHYL VIOLET, pure	0.1 gm.	.28
METHYLENE BLUE, pure	0.1 gm.	.28
ROMANOWSKY STAIN (Leishman's Powder)	0.015 gm.	.28
ROMANOWSKY STAIN (Wright's Modification)	0.05 gm.	.28
THIONIN BLUE, pure	0.1 gm.	.28
TOISON BLOOD FLUID		.28
TOLUIDINE BLUE		.28

CULTURE MEDIA IN TABLET FORM	Weight Per Tablet	Per Tube of 10
BILE SALT AGAR-AGAR (MacConkey)		.30
NUTRIENT AGAR-AGAR		.30
NUTRIENT BROTH		.30

BIOLOID-BLACK

This is one of the "Bioloid" Specialties.

A finely divided colloidal suspension, free from interfering particles. It is ideal for Burri's Method for spirochetae pallida.

BIOLOID FIXING SOLUTIONS

	Oz.	½-Lb.	Lb.
ACETIC ALCOHOL MIXTURE, CARNOY'S	$ .40	$1.85	$3.10
ACETIC ALCOHOL CHLOROFORM MIXTURE, CARNOY'S	.35	1.75	2.95
ACETIC SUBLIMATE SOLUTION	.30	.75	1.35
ACID ALCOHOL	.45	2.50	4.75
CARNOY'S ACETIC ALCOHOL MIXTURE	.40	1.85	3.10
CARNOY'S ACETIC ALCOHOL CHLOROFORM MIXTURE	.35	1.75	2.95
CHROMO-ACETIC ACID SOLUTION, FLEMING'S	.30	.60	.80
FLEMING'S CHROMO-ACETIC ACID SOLUTION	.30	.60	.80
FLEMING'S OSMIC-CHROMO-ACETIC ACID SOLUTION	.85	3.50	6.00
GILSON'S FLUID	.30	.90	1.75
HERMAN'S SOLUTION	3.00	20.00	36.00
MUELLER'S FLUID	.30	.60	.80
ORTH'S BICHROMATE-FORMALDEHYDE SOLUTION	.35	.65	1.00
OSMIC ACID SOLUTION, 1% aqueous	3.00	20.00	36.00
OSMIC-CHROMO-ACETIC ACID SOLUTION, FLEMING'S	.85	3.50	6.00
OSMIC-PICRO-ACETIC ACID SOLUTION	.75	3.00	5.75
OSMIC-PICRO-SUBLIMATE SOLUTION	1.30	7.00	13.00
OSMIC-PLATINIC-ACETIC SOLUTION, HERMAN'S	3.00	20.00	36.00
POTASSIUM BICHROMATE-FORMALDEHYDE SOLUTION, ORTH'S	.35	.65	1.00
ZENKER'S FLUID	.35	.65	1.00

BIOLOID PRODUCTS

include Stains, Chemicals, Clinical and Diagnostic Reagents, Biological and Histological Materials of the highest grade and quality; each precisely suited for its purpose.

Why not specify "Bioloid"?

MEDIA FOR MOUNTING

	Oz.
ASPHALTUM, BIOLOID (quick drying)	$ .15
BALSAM, CANADA, BIOLOID (paper filtered)	.40
In 10 cc. tubes, per tube, 15c	
In 20 cc. tubes, per tube, 25c	
BALSAM, CANADA, IN XYLOL, BIOLOID	.40
In 10 cc. tubes, per tube, 15c	
In 20 cc. tubes, per tube, 25c	
BALSAM, CANADA, NEUTRAL BIOLOID	.65
BELL'S MICROSCOPICAL CEMENT	.75
BROWN'S TRANSPARENT RUBBER CEMENT	.45
BRUN'S GLUCOSE MEDIUM, BIOLOID	.50
BRUNSWICK BLACK	.35
CEDAR OIL, BIOLOID, (thick)	.40
DEAN'S MEDIUM	.50
DeKHOTINSKY'S CEMENT, hard	.85
DeKHOTINSKY'S CEMENT, medium	.85
DeKHOTINSKY'S CEMENT, soft	.85
FARRANT'S MEDIUM	.40
GLYCERINE JELLY, BIOLOID	.40
GOLD SIZE, BIOLOID	.30
HOLLIS' GLUE	.60
JEFFRIES' MARINE GLUE	.50
MARINE GLUE, BIOLOID (colorless)	.50
MARINE GLUE, Y-34, BIOLOID	.50
MARINE GLUE, Y-34X, BIOLOID	.55
MARINE GLUE, JEFFRIES'	.50
METHYL VIOLET SHELLAC, insoluble in xylol and water)	.45
MEYER'S ALBUMEN FIXATIVE	.45
NEUTRAL BALSAM, BIOLOID	.65
WHITE ZINC CEMENT, BIOLOID	.50
XYLOL-BALSAM, BIOLOID	.60

INJECTION MASSES

	4 Ozs.	Lb.	5 Lbs.
COLD—BLUE	$ .35	$ .75	$3.00
COLD—RED	.90	1.75	7.00
WARM—BLUE (injected at 45°C.)	.70	1.50	6.00
WARM—RED (injected at 45°C.)	1.90	3.80	15.00

EMBEDDING SUBSTANCES

		Oz.	Lb.
BIOLOIDIN (Replacing Celloidin)		$1.00	
HISTOLOID		1.00	
PARAFFIN, BIOLOID, best white, M.P. 37-38°C			$ .30
PARAFFIN, BIOLOID, best white, M.P. 40-45°C			.30
PARAFFIN, BIOLOID, best white, M.P. 45-50°C			.35
PARAFFIN, BIOLOID, best white, M.P. 50-55°C			.40
PARAFFIN, BIOLOID, best white, M.P. 60-62°C			.45
PARAFFIN, BIOLOID, best white, M.P. 74-76°C			.65
PARLODION		1.00	
PITH FOR SECTIONING, Per bundle	15c		

BACTERIOLOGICAL SUGARS

	10 Grams	1 Oz.	1 Lb.
ARABINOSE	$4.50	$12.50	
DEXTROSE (d-Glucose)	.20	.50	$4.00
DULCITE (Dulcitol)	10.00	25.00	
d-GALACTOSE	.70	1.85	21.85
INULIN	2.00	5.00	60.00
INVERT SUGAR SYRUP	.20	.30	1.50
LACTOSE	.20	.30	3.00
d-LEVULOSE (Fructose)	1.60	5.10	55.00
d-LEVULOSE, Syrupy	.80	2.75	26.00
MALTOSE	.70	1.85	21.85
MANNITE (d-Mannitol)	.35	.85	10.00
d-MANNOSE	4.00	11.00	
MELIZITOSE	1.50	4.50	50.00
RAFFINOSE	1.50	4.25	50.00
RHAMNOSE	7.50	20.00	
SACCHAROSE	.25	.25	1.25
SALICIN	1.25	2.50	
SORBITE	12.50	33.00	
TREHALOSE	10.00	25.00	
XYLOSE	4.50	12.00	

BIOLOIDIN

Bioloidin is especially prepared to meet the requirements of biologists and microscopists for preparing pure, concentrated collodion for embedding tissues preparatory to sectioning.

Bioloidin being highly purified, may be used for surgical collodion, the usual proportion being four parts each of alcohol and ether to one part of Bioloidin.

CULTURE MEDIA DEHYDRATED

	¼ Lb.	1 Lb.
AGAR, ENDO'S	$1.20	$3.75
AGAR, KRUMWIEDE'S TRIPLE SUGAR	1.40	4.75
AGAR, LITMUS LACTOSE	2.00	7.00
AGAR, NUTRIENT	1.25	4.00
AGAR, NUTRIENT 1½%	1.25	4.00
AGAR, RUSSELL'S DOUBLE SUGAR	1.50	5.00
BILE, LACTOSE, PEPTONE	.90	2.50
BLOOD SERUM, LOEFFLERS'	2.75	10.00
BROTH, DEXTROSE	1.70	5.75
BROTH, LACTOSE	1.25	4.00
BROTH, NUTRIENT	1.50	5.00
BROTH, WHEY	1.25	4.00
DEXTROSE BROTH	1.70	5.75
DOUBLE SUGAR AGAR, RUSSELL'S	1.50	5.00
ENDO'S AGAR	1.20	3.75
GELATINE, NUTRIENT	.75	2.25
KRUMWIEDE'S TRIPLE SUGAR AGAR	1.40	4.75
LACTOSE BROTH	1.25	4.00
LACTOSE LITMUS AGAR	2.00	7.00
LACTOSE PEPTONE BILE	.90	2.45
LACTOSE PURPLE AGAR	2.00	7.00
LIVER BROTH	.80	2.85
LITMUS, LACTOSE, AGAR	2.00	7.00
LITMUS MILK	.75	1.75
LOEFFLER'S BLOOD SERUM	2.75	10.00
NEUTRAL RED MEDIUM	.80	2.00
NUTRIENT AGAR	1.25	4.00
NUTRIENT AGAR 1½%	1.25	4.00
NUTRIENT BROTH	1.50	5.00
NUTRIENT GELATINE	.95	2.75
PURPLE LACTOSE AGAR	2.00	7.00
RUSSELL'S DOUBLE SUGAR	1.50	5.00
VEAL BROTH	2.50	4.85
WHEY BROTH	1.25	4.00

PREPARED MEDIA

The media supplied by us is prepared after methods of the A. P. H. A. It is standardized and tubes are tested for sterility before shipment.

BIOLOID PREPARED CULTURE MEDIA

CULTURE MEDIA, in sealed tubes or vials

1. NUTRIENT GELATIN
2. GLUCOSE GELATIN
3. LITMUS GELATIN
4. NUTRIENT AGAR
5. GLYCERINE AGAR
6. GLUCOSE AGAR
7. PEPTONE (vials)
8. BLOOD SERUM, LOEFFLER'S
11. BOUILLON (vials)
12. LACTOSE AGAR
13. LACTOSE LITMUS AGAR
14. SACCHAROSE AGAR
15. TRIPLE-SUGAR AGAR

	Doz.	100
The above in any assortment	$1.50	$12.00
9. STERILE CULTURE TUBES, plugged	.75	6.00
10. STERILE CULTURE TUBES, with Sterile Swabs	.90	7.20

Note.—If desired, Nos. 7 and 11 may be obtained in 100 cc. bottles and 1 doz. test tubes, sterile, at the same price.

THE FOLLOWING ARE PREPARED UPON SPECIAL ORDER

AGAR, ENDO'S
BILE, PLAIN, WITH PEPTONE OR GLYCERIN
BLOOD MEDIUM
BLOOD SERUM, ALKALINE
EGG MEDIUM, DORSET'S
HISS MEDIUM
LITMUS MILK
LITMUS WHEY
POTATO CULTURES
SABOURAUD'S MEDIUM
SYNTHETIC MEDIA
VON DRIGALSKI-CONRADI MEDIUM

NUTRIENT SUBSTANCES

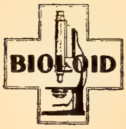
	Oz.	¼ Lb.	½ Lb.	Lb.
AGAR AGAR, BIOLOID, powdered	$ .25	$ .60	$1.10	$2.10
AGAR AGAR, MERCK, powdered	.20	.60	1.10	2.00
AGAR AGAR, BIOLOID, shreds	.20	.50	.80	1.45
AGAR AGAR, BACTO.	.45	1.20		4.00
BEEF, BACTO.		.70		2.25
BEEF EXTRACT, ARMOUR'S		1.00	1.75	3.00
BEEF EXTRACT, LIEBIG'S		1.20	1.85	3.35
DEXTROSE, BACTO.	.45	1.30		4.85
DEXTROSE, BIOLOID	.20	.50	.90	1.60
GELATINE, BACTO.	.25	.75		2.25
GELATINE, BIOLOID, granular	.40	.40	.70	1.25
GELATINE, SILVER LEAF BIOLOID, white	.20	.50	.95	1.75
LACTOSE, BACTO.	.30	.90		2.50
LACTOSE, BIOLOID	.20	.50		1.50
LIVER, BACTO.			1.45	2.80
OXGALL, BACTO.	.35	1.10		3.40
OXGALL, INSPISSATED	.30	.90	1.65	2.65
PANCREATIN, active, pure	.35	1.10	2.00	3.50
PEPSIN, powdered	.45	1.50	2.85	4.85
PEPTONE, ARMOUR'S	.45	1.10	2.00	3.50
PEPTONE, BACTO.	.40	1.75		4.35
PEPTONE, BIOLOID	.35	1.10	2.00	3.35
PEPTONE, FAIRCHILD BROS. & FOSTER	.75	3.00		7.50
PEPTONE, from meat, dry	.35	1.10	2.00	3.35
PEPTONE, PARKE, DAVIS CO.	.75	3.00		7.50
PEPTONE, WITTE'S	.50	1.80	3.40	6.50
TRYSIN	4.25			
TRYPSIN, BACTO. (per box of 12 cc. ampules 10 cc. each)	3.85			

DENATURED ABSOLUTE ALCOHOL

We suggest the use of our denatured absolute alcohol where the usual denaturants will not interfere. This may be obtained from us without the formalities required for the purchase of ethyl alcohol.

DIAGNOSTIC TESTS AND REAGENTS

	Each
AGGLUTINATING SERUMS, for the identification of Bacillus typhosus	$2.60
For the identification of Bacillus paratyphosus A	2.60
For the identification of Bacillus paratyphosus B	2.60
For the identification of Meningococcus Type I, 1-mil. vial	2.60
For the identification of Meningococcus Type II, 1-mil. vial	2.60
For the identification of different types of Meningococcus Polyvalent, 1-mil. vial	2.60
For the identification of the Spirillum of Asiatic Cholera	2.60
For the identification of Pneumococcus Type I	2.60
For the identification of Pneumococcus Type II	2.60
For the identification of Pneumococcus Type III	2.60
ANTIGEN ABORTUS—1 c. c. ampule	6.60
ANTIGEN CHOLESTERIN—Fortified, 10 tests	2.60
ANTIGEN GLANDERS—1 c. c. ampule	6.60
ANTIGEN GONOCOCCUS, complement fixation test	3.30
ANTIGEN (NOGUCHI), 5 ampules, sufficient for 10 tests	3.30
ANTISHEEP HEMOLYTIC AMBOCEPTOR—1 c. c. ampules	2.00
ANTISHEEP HEMOLYTIC AMBOCEPTOR—dried on paper	2.00
ANTISHEEP HEMOLYTIC AMBOCEPTOR—tubes of 10 tablets	2.00
ANTIHUMAN AMBOCEPTOR—dried on paper, 10 tests	3.30
BASS TEST, 60 to 120 tests	3.30
COLLOIDAL GOLD for Lange Test, supplied in 50-mil. vials	.75
GONOCOCCUS ANTIGEN for complement fixation test	3.30
LUETIN, supplied with Intradermic Syringes (single test package)	1.65
(5-test package)	6.60
Hospital size (50-test package)	33.50
MORO CUTANEOUS REACTION—In 1 grain tube, 4 tests to the tube, per package of 2 tubes (8 tests)	1.35
NOGUCHI ANTIGEN, 5 ampules, sufficient for 10 tests	3.30
NORMAL SALT SOLUTION—30 c. c. vials	.70
SCHICK TEST, (Diphtheria Toxin Standardized), for ascertaining susceptibility to diphtheria by the Intradermic Test, sufficient for from 1 to 30 tests. This package contains: One intradermic syringe filled with Diphtheria Toxin undiluted, one 20-mil. vial containing sterile physiologic saline solution for dilution of toxin, one Intradermic Needle	1.35
SUSPENSION STERILIZED CULTURE B. TYPHOSUS, in 30-mil. vials, Per vial	1.00
SUSPENSION STERILIZED CULTURE B. PARATYPHOSUS "A"	1.00
SUSPENSION STERILIZED CULTURE B. PARATYPHOSUS "B"	1.00
TUBERCULIN OINTMENT, for the Moro Cutaneous Reaction, in 1 gram tube, 4 tests to the tube Per pkg. of 2 tubes (8 tests)	1.35
TYPHOID FEVER (Sero-Diagnosis), Widal Reaction; Borden's modification, Complete outfit	6.60
TYPHOID FEVER, Bass Test, 60 to 120 tests	3.30
VON PIRQUET (Tuberculin old-Human Type):	
Single test packages, with control	.35
In packages of 3 capillary tubes, with control	.90
In packages of 10 capillary tubes, with control	1.70
WIDAL REACTION TEST Complete Outfit	6.60


BIOLOID

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THE WILL CORPORATION
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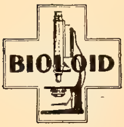
AN INVITATION

A cordial invitation is extended to our many friends to pay a visit to our plant when in Rochester. We feel that the understanding, which comes from personal touch, will be to our mutual advantage.


BIOLOID

USEFUL TABLES

Temperature and Pressure of Saturated Steam

Absolute Pressure lbs. per square inch	Temperature Fahrenheit	Temperature Centigrade	Absolute Pressure lbs per square inch	Temperature Fahrenheit	Temperature Centigrade	Absolute Pressure lbs. per square inch	Temperature Fahrenheit	Temperature Centigrade
			25	240.1	115.6	40	267.3	130.8
			26	242.4	116.8	41	268.7	131.5
			27	244.4	117.9	42	270.2	132.3
			28	246.4	119.0	43	271.7	133.1
14.7	212	100	29	248.4	120.2	44	273.1	133.9
15	213.0	100.6	30	250.3	111.3	45	274.5	134.7
16	216.3	102.4	31	252.2	122.3	46	275.8	135.5
17	219.4	104.1	32	254.1	123.3	47	277.2	136.2
18	222.4	105.8	33	255.8	124.2	48	278.5	136.9
19	225.2	107.3	34	257.6	125.3	49	279.8	137.2
20	238.0	108.9	35	259.3	126.2	50	281.0	138.3
21	230.6	110.3	36	261.0	127.2			
22	233.1	111.7	37	262.6	128.1			
23	235.5	113.0	38	264.2	129.0			
24	237.8	114.3	39	265.8	129.9			

Linear Equivalents—Centimeters and Inches

Centimeters	Inches	Centimeters	Inches	Centimeters	Inches	Centimeters	Inches
1	.4	8	3.2	35	13.8	70	27.6
2	.8	9	3.5	40	15.8	75	29.5
3	1.2	10	3.9	45	17.7	80	31.5
4	1.6	15	5.9	50	19.7	85	33.5
5	2.0	20	7.9	55	21.7	90	35.4
6	2.4	25	9.8	60	23.6	95	37.4
7	2.8	30	11.8	65	25.6	100	39.4

Linear Equivalents—Inches and Centimeters

Inches	Centimeters	Inches	Centimeters	Inches	Centimeters	Inches	Centimeters
1	2.5	10	25.4	19	48.3	28	71.1
2	5.0	11	27.9	20	50.8	29	73.7
3	7.6	12	30.5	21	53.3	30	76.2
4	10.2	13	33.0	22	55.9	31	78.7
5	12.7	14	35.6	23	58.4	32	81.3
6	15.2	15	38.1	24	61.6	34	86.4
7	17.8	16	40.6	25	63.5	35	88.9
8	20.3	17	43.2	26	66.0	36	91.4
9	22.9	18	45.7	27	68.6		

Table Showing Specific Gravity Corresponding with Degrees of Hydrometers, Baumé Scale at $\frac{60^\circ}{60^\circ}$ F.

For Liquids Lighter than Water

Degree of Hydrometer	Specific Gravity	Degree of Hydrometer	Specific Gravity	Degree of Hydrometer	Specific Gravity	Degree of Hydrometer	Specific Gravity
10	1.0000	27	0.8917	44	0.8045	61	0.7329
11	0.9929	28	0.8860	45	0.8000	62	0.7290
12	0.9858	29	0.8805	46	0.7954	63	0.7253
13	0.9790	30	0.8750	47	0.7909	64	0.7216
14	0.9722	31	0.8695	48	0.7865	65	0.7179
15	0.9655	32	0.8641	49	0.7821	66	0.7142
16	0.9589	33	0.8588	50	0.7777	67	0.7106
17	0.9523	34	0.8536	51	0.7734	68	0.7070
18	0.9459	35	0.8484	52	0.7692	69	0.7035
19	0.9395	36	0.8433	53	0.7650	70	0.7000
20	0.9333	37	0.8383	54	0.7608	71	0.6965
21	0.9271	38	0.8333	55	0.7567	72	0.6930
22	0.9210	39	0.8284	56	0.7526	73	0.6896
23	0.9150	40	0.8235	57	0.7486	74	0.6863
24	0.9090	41	0.8187	58	0.7466	75	0.6829
25	0.9032	42	0.8139	59	0.7407	76	0.6796
26	0.8974	43	0.8092	60	0.7368	77	0.6763

For Liquids Heavier than Water

Degree of Hydrometer	Specific Gravity	Degree of Hydrometer	Specific Gravity	Degree of Hydrometer	Specific Gravity	Degree of Hydrometer	Specific Gravity
0	1.0000	19	1.1507	38	1.3551	57	1.6477
1	1.0069	20	1.1600	39	1.3676	58	1.6666
2	1.0139	21	1.1693	40	1.3809	59	1.6860
3	1.0211	22	1.1788	41	1.3942	60	1.7058
4	1.0283	23	1.1885	42	1.4077	61	1.7261
5	1.0357	24	1.1983	43	1.4215	62	1.7469
6	1.0431	25	1.2083	44	1.4356	63	1.7682
7	1.0507	26	1.2184	45	1.4500	64	1.7901
8	1.0583	27	1.2288	46	1.4646	65	1.8125
9	1.0661	28	1.2393	47	1.4795	66	1.8354
10	1.0740	29	1.2500	48	1.4949	67	1.8589
11	1.0820	30	1.2608	49	1.5104	68	1.8831
12	1.0902	31	1.2719	50	1.5263	69	1.9079
13	1.0984	32	1.2831	51	1.5425	70	1.9333
14	1.1008	33	1.2946	52	1.5591	71	1.9595
15	1.1153	34	1.3063	53	1.5760	72	1.9863
16	1.1240	35	1.3181	54	1.5934	73	2.0139
17	1.1328	36	1.3302	55	1.6111	74	2.0422
18	1.1417	37	1.3425	56	1.6292	75	2.0914

The formulas below may prove useful by enabling any one to calculate the sp. gr. corresponding with the several degrees of Baumé's hydrometer, and, conversely, the degree of Baumé corresponding with the sp. gr.

1. **For Liquids Lighter than Water.** The following formulas give the sp. gr. as represented in the foregoing table; or, the specific gravity being known, give the corresponding degree of Baumé.

$$\frac{140}{B^\circ + 130} = \text{sp. gr.; and } \frac{140}{\text{sp. gr.}} - 130 = B^\circ.$$

2. **For Liquids Heavier than Water.**

$$\frac{145}{145 - B^\circ} = \text{sp. gr., and } 145 - \frac{145}{\text{sp. gr.}} - B^\circ.$$

Conversion of Centrigrade to Fahrenheit Degrees

° C.	° F.	° C.	° F.	° C.	° F.	° C.	° F.	° C.	° F.
—30	—22.0	+27	+80.6	+83	+181.4	+139	+282.2	+195	+383.0
—29	—20.2	28	82.4	84	183.2	140	284.0	196	384.8
—28	—18.4	29	84.2	85	185.0	141	285.8	197	386.6
—27	—16.6	30	86.0	86	186.8	142	287.6	198	388.4
—26	—14.8	31	87.8	87	188.6	143	289.4	199	390.2
—25	—13.0	32	89.6	88	190.4	144	291.2	200	392.0
—24	—11.2	33	91.4	89	192.2	145	293.0	201	393.8
—23	—9.4	34	93.2	90	194.0	146	294.8	202	395.6
—22	—7.6	35	95.0	91	195.8	147	296.6	203	397.4
—21	—5.8	36	96.8	92	197.6	148	298.4	204	399.2
—20	—4.0	37	98.6	93	199.4	149	300.2	205	401.0
—19	—2.2	38	100.4	94	201.2	150	302.0	206	402.8
—18	0.4	39	102.2	95	203.0	151	303.8	207	404.6
—17	+1.4	40	104.0	96	204.8	152	305.6	208	406.4
—16	3.2	41	105.8	97	206.6	153	307.4	209	408.2
—15	5.0	42	107.6	98	208.4	154	309.2	210	410.0
—14	6.8	43	109.4	99	210.2	155	311.0	211	411.8
—13	8.6	44	111.2	100	212.0	156	312.8	212	413.6
—12	10.4	45	113.0	101	213.8	157	314.6	213	415.4
—11	12.2	46	114.8	102	215.6	158	316.4	214	417.2
—10	14.0	47	116.6	103	217.4	159	318.2	215	419.0
—9	15.8	48	118.4	104	219.2	160	320.0	216	420.8
—8	17.6	49	120.2	105	221.0	161	321.8	217	422.6
—7	19.4	50	122.0	106	222.8	162	323.6	218	424.4
—6	21.2	51	123.8	107	224.6	163	325.4	219	426.2
—5	23.0	52	125.6	108	226.4	164	327.2	220	428.0
—4	24.8	53	127.4	109	228.2	165	329.0	221	429.8
—3	26.6	54	129.2	110	230.0	166	330.8	222	431.6
—2	28.4	55	131.0	111	231.8	167	332.6	223	433.4
—1	30.2	56	132.8	112	233.6	168	334.4	224	435.2
0	32.0	57	134.6	113	235.4	169	336.2	225	437.0
+1	33.8	58	136.4	114	237.2	170	338.0	226	438.8
2	35.6	59	138.2	115	239.0	171	339.8	227	440.6
3	37.4	60	140.0	116	240.8	172	341.6	228	442.4
4	39.2	61	141.8	117	242.6	173	343.4	229	444.2
5	41.0	62	143.6	118	244.4	174	345.2	230	446.0
6	42.8	63	145.4	119	246.2	175	347.0	231	447.8
7	44.6	64	147.2	120	248.0	176	348.8	232	449.6
8	46.4	65	149.0	121	249.8	177	350.6	233	451.4
9	48.2	66	150.8	122	251.6	178	352.4	234	453.2
10	50.0	67	152.6	123	253.4	179	354.2	235	455.0
11	51.8	68	154.4	124	255.2	180	356.0	236	456.8
12	53.6	69	156.2	125	257.0	181	357.8	237	458.6
13	55.4	70	158.0	126	258.8	182	359.6	238	460.4
14	57.2	71	159.8	127	260.6	183	361.4	239	462.2
15	59.0	72	161.6	128	262.4	184	363.2	240	464.0
16	60.8	73	163.4	129	264.2	185	365.0	241	465.8
17	62.6	74	165.2	130	266.0	186	366.8	242	467.6
18	64.4	75	167.0	131	267.8	187	368.6	243	469.4
19	66.2	76	168.8	132	269.6	188	370.4	244	471.2
20	68.0	77	170.6	133	271.4	189	372.2	245	473.0
21	69.8	78	172.4	134	273.2	190	374.0	246	474.8
22	71.6	79	174.2	135	275.0	191	375.8	247	476.6
23	73.4	80	176.0	136	276.8	192	377.6	248	478.4
24	75.2	81	177.8	137	278.6	193	379.4	249	480.2
25	77.0	82	179.6	138	280.4	194	381.2	250	482.0
26	78.8								

Formula for Conversion

°F to °C

$$\frac{5\ (F - 32)}{9} = °C$$

°C to °F

$$\frac{9C}{5} + 32 = °F$$

°R to °F

$$\frac{9R}{4} + 32 = °F$$

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